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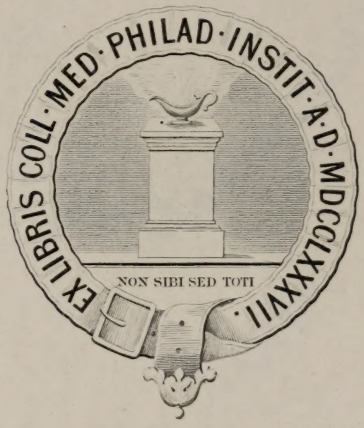

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THE

CINCINNATI MEDICAL NEWS.

EDITED BY

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Fellow of American Academy of Medicine, etc.

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CINCINNATI MEDICAL NEWS.

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Original Contributions.

Antisepsis in the Treatment of Disease.

BY D. W. C. WADE, M. D., HOLLY, MICHIGAN.

FOLLOWING my interpretation of the above title, I shall attempt to present a series of deductions, founded upon recent literature and my own experiments and experience, on the therapeutics of the diseases, other than surgical, that have the fermentative process as a prominent element in their etiology. I regard it as properly without the province of this essay to occupy space with a history of antisepsis, or a review of the great work that has led to a fuller understanding of the subject, or even to recite the long list of experimenters and writers who have afforded us our enlightenment regarding microscopic life; but I shall rather confine myself to bringing up to the present the practical side of this interesting subject.

An intelligent discussion of the treatment of disease necessarily involves a reference to pathological conditions, and in no other subject can such references prove of more value than in this.

Believing it to be now almost universally accepted that fermentation consists in the development of a minute organic formation at the expense of an old organism, I do not regard it as profitable to bring forward evidence to sustain this definition, but shall use the term with reference to its most complete signification. We are not yet prepared to accept as final any statements as to the discovery or description of the poison, or more properly the organism, that appears to be the *materies morbi* in the diseases that are

primarily constitutional, and still it is probable, that for analogical reasons, the medical profession are now quite unanimous in the belief that a certain class of diseases called zymotic, have their origin in infection from a living poison. It is quite different, however, with the diseases that are at first local, for in many of them the infecting agent has been minutely studied. Antiseptic measures, from the very nature of the term, imply a direct attention to the causal elements of the disease. It would be unfair to apply to antisepsis the title of empiricism, although in many cases a fermentable cause is not demonstrable, yet by a reasonable reference its application to remove diseased conditions appears indicated, and the result seems to sustain the presumption; therefore we give antisepsis a rank among rational therapeutics. There can be no doubt that in many instances a suppositious fermentation pathology may be rendered reasonably positive by the result of antiseptic treatment, thus corresponding to many other determinations in pathology by the therapeutics.

Before studying the special indications for antiseptic treatment, let us glance at the armamentarium at our disposal and observe some of the properties of the various septicidal agents.

Alcohol is one of the best, if it really is not the most reliable preservative known. Thirteen and one-half per cent. of commercial alcohol paralyzes bacteria, but not permanently. Fifty per cent. presents decay of animal tissues indefinitely. Twenty per cent., used as a surgical antiseptic precaution, with proper subsequent protection, has in my hands been unequaled as a preservative in wounds from minor cuts up to ovariotomy. I wish to emphasize its importance as a germicide, but I do not wish to urge its use to arrest fermentation already commenced. It is itself susceptible of acetic fermentation.

Turpentine is here mentioned as a type of the balsams and other terebinthenates. This class of septicides are quite pronounced in their action, and are often very useful as protectives. They are generally used with reference to a combination of their other valuable properties and those of germ destroying.

Carbolic acid enjoys the widest reputation as an antiseptic of any known remedy. I do not hesitate to question its right to this position, not because it is weak, but because some of its properties have been overrated, and because

other of its properties are frequently very objectionable. For these reasons it has been the means recently of breaking the force of the antiseptic theory of the treatment of wounds all over the world. I do not think it especially creditable that carbolic acid should have been so intimately associated with antisepsis that the undesirableness of some of its effects could so nearly upset one of the most valuable plans to benefit humanity of any age. Its effect upon bacteria is to produce apparent death. It is more than probable that its action upon this organism is really paralysis from which resuscitation may take place. Its action to prevent putrefaction, as an antiseptic, surgical precaution has been a success. Its action to prevent septicæmic infection, after the commencement of putrefaction, has been a miserable failure, and very probably because it does not destroy the life of bacteria with a sufficient degree of certainty. I should say that this failure may often depend upon its marked power to coagulate albumen, and thus forming a protection against a thorough action. Its local anæsthetic properties and its power to preserve the sweetness of albuminous fluids are what constitute its value. Its unpleasant odor, its poisonous effects when absorbed in considerable quantities, and its failure to permanently remove the dangers of septic infection are the reasons why it may not take precedence over other antiseptics.

Chloral hydrate is an antiseptic I wish to especially recommend for local use. Its first effect is that of an irritant, which is rapidly followed by a reverse effect. I am unable to find a large amount of literature upon the antiseptic properties of chloral, but I have myself tested it in many ways, and I feel confident that the combination of its preservative properties with that of a sedative, and perhaps other unexplained effects it may produce, render it a very desirable acquisition to the list of of antiseptics.

Chloric acid is an antiseptic depending upon both its chlorine and oxygen for its activity. These elements are loosely held together, each having a much stronger affinity for hydrogen than for each other. Its applicability is in place of its potassium salt, where both are acid and positive results are desirable. The best formula I can give for its convenient production is the one originated by myself and published in the Detroit *Lancet* in June, 1879, and is as follows:

Take of—

Chlorate of potassium, . . .	360 grs.
Tartaric acid, ...	440 grs.
Water, ...	3 fluid ounces.

Dissolve the salt in two-thirds of the water by the aid of heat. Before cooling, add the acid previously dissolved in one-third of the water. After cooling and completion of the precipitation, decant. Each fluid drachm contains about fifteen grains of chlorate of potassium in equivalence.

Bromide is such an acrid substance that its use as an antiseptic is extremely limited. That it has great power can not be denied.

Iron as a chloride or a sulphate is an active antiseptic, and effectually destroys microscopic organisms. These salts are particularly useful where a firm albuminous coagulum is desired, and where an astringent is also indicated.

Mercury in the form of a salt is frequently prescribed, when often, no doubt, its beneficial effects depend upon its septicidal proportions.

The above-described antiseptic remedies all coagulate albumen. Some of them combine to form albuminates, and others render this proteid element of the animal economy insoluble in an unknown manner. Some of the chemical albuminous insolubles are rendered soluble by the addition of reagents, as in the case of the albuminate of mercury which is soluble in a solution of chloride of sodium. Considerable importance often attaches to the selection of an antiseptic in its relation to albumen, and hence I have determined by experiment what I have been unable to find in print on this subject. The following antiseptics do not coagulate albumen.

Salicylic acid and the salicylates have come into great prominence as anti-ferments, and in my opinion justly so. Their comparatively unirritating quality renders them frequently applicable when other similar remedies of equal power would be contra-indicated. The salicylic salts are very easily decomposed, setting the acid free, without which change their power would be quite limited. The slight solubility of the acid (1 to 300) renders it all the more valuable in some instances, and in others almost useless. The solubility of its alkaline salts does little more than facilitate its internal administration, after which the stomach acids (if present) liberate salicylic acid with precisely the

same eventual results as if it had been administered uncombined.

The constitutional effects of this acid may be so undesirable as to render its continued internal use impracticable. One-fifth per cent. of this acid stops the movement of bacteria. It appears to have no other local effect, and hence it is not as successful in local treatment as are many other septicides. Were it not for its cerebral effects, it is probable that a sufficient quantity could be safely given to destroy bacteria in the circulation, which would require for a person weighing 160 pounds about 280 grains.

Boracic acid is not a new anti-ferment, but it has occupied of late much more space in the periodical literature than formerly. It is a weak antiseptic, yet it and its soluble salts quite successfully prevent germ incubation. It is the least irritating of any known antiseptic, and produces little or no observable effect upon the animal economy; hence the dose may safely be large. According to my observation its value for topical purposes has been considerably exaggerated, and I look for a decrease in the number of its admirers in the near future.

Sulphurous acid effectually destroys minute organisms. It is an unstable gas, and having little value other than as an antiseptic, its range of usefulness is much modified. It should, however, be firmly borne in mind that this remedy in a concentrated form is one of the most energetic antiferments known. It is irrespirable, but appears to be quite innocuous when properly administered by the stomach. The undecomposed salts of this acid are of little or no value, but having slight affinity for satifiable basis, its benefits may accrue by this most convenient method of application and administration. As a rule, however, the use of the sulphites will prove to be much more satisfactory when their decomposition is artificially provided for. The sulphite of magnesium is but slightly soluble in water, but the bisulphite of this base is soluble, and it can be extemporaneously prepared by adding one-half an equivalent of citric acid. The mixture will then contain citrate of magnesium, bisulphite of magnesium and water, which is probably the most convenient and eligible way of administering sulphurous acid.

Benzoate of sodium is about the only satisfactory representative of benzoic acid. In the stomach the latter is freed from its base by hydrochloric acid, and it is in the

uncombined condition that it exerts an anti-ferment influence. Its other properties are needed to sustain this remedy in the list of antiseptics.

Chlorine has a position among anti-ferments that as yet is invaluable. It is, however, of little other value in medicine. Its action is through the great affinity it possesses for hydrogen, being capable of breaking up organic tissues by its abstraction of this gaseous element, resulting in the formation of hydrochloric acid. It is one of those septicides that can be depended upon to sweeten already putrefactive fluids, and it is sufficiently unirritating to be appropriately used on sensitive tissues. It is irrespirable, but does not produce marked constitutional effects by way of the circulation in reasonable amounts. Hypochloric acid combined with a base has proved in my hands to be the most satisfactory form for its use, either internally or topically. The solution of hypochlorite of potassium after the officinal formula for hypochlorite of sodium, by substituting bicarbonate of potassium for carbonate of sodium is the preparation I should recommend. It is proper to say here that no gas sufficiently diluted with air to be respirable, will have the least influence upon germs or their products, hence the unpleasant custom of perfuming a sick apartment with the chlorine emanating from dishes of hypochlorite of calcium (chloride of lime) can only be founded upon ignorance.

Chlorate of potassium has many satisfactory uses as an anti-ferment. As a salt it is worthless, its whole value depending upon, first, its chloric acid, easily set free, and second, the further decomposition of chloric acid as heretofore described.

Iodine belongs in the category of the halogens, sulphur, chlorine and bromine, each properly applied or combined having an immense energy as a septicide. The other properties of these halogens are quite dissimilar, but the septicidal action of each probably depends upon its chemical affinity for hydrogen, perhaps excepting sulphur. It should be noted that the chemical affinity of the halogens is immensely more energetic in their nascent state. The physical properties of iodine give it a wide range of applicability as an antiseptic, and the result of my clinical observations in its use gives me an unbounded confidence in its power to arrest fermentative diseased action. It is among those remedies that have had the widest of empirical uses, many

of which are now, however, reduced to a rationality by the light of recent studies of the fermentative process.

Iodoform is a bland sedative, and when changed by contact with organic tissue into nascent iodine, becomes an active antiseptic. Such a combination of properties is probably not possessed by any other substance, and therefore its invaluable applicability in certain diseased conditions is shared by itself alone. Its slight solubility prevents its substitution many times for otherwise less desirable remedies.

Permanganate of potassium ranks among the most active destroyers of minute organisms. Its feebly held oxygen has a great affinity for the hydrogen of organic substances—hence its mode of action. Unfortunately its effect upon sentient nerves is too pronounced to permit of an extensive application of its power to medical purposes, and it is therefore relatively seldom prescribed for its oxidizing properties.

Quinine is capable of preventing fermentation to a certain extent. As a topical remedy it is inferior to many other antiseptics, and is therefore but little used in this manner. Its special antagonism to the *materies morbi* of malarious affections is one of the most interesting topics for thought that is brought out in the study of antiseptic medicine. Its peculiar action in malaria has led to much speculation, and it has been exhaustively experimented with in other zymotic diseases, resulting in total failure.

Thymol has been claimed to be the most deadly poison to microscopic life yet discovered. Motion ceases in putrefactive fluids upon the addition of less than one-tenth of one per cent. It is but slightly soluble in water, but I have found after many experiments that a five per cent. solution can be made by the addition of castile soap. Thymol is a local irritant, and I believe is not known to have marked medical properties excepting those before mentioned.

Hot water (115° F. to 140° F.) is at once one of the simplest and most valuable of antiseptics. Water at a temperature between 60° F. and 105° F. is necessary to the development of minute organisms. At 115° F. to 140° F. it effectually puts an end to their development. At 160° F. it coagulates albumen. The proper temperature for the destruction of fermentative products is easily borne in any part of the body, and on account of its property of lessening hyperæmia, and thus hyperæsthesia, there arise many occasions where no other treatment can equal the positive

results that may be obtained from the free use of this simple remedy.

Glycerine is capable to a considerable extent of preventing some forms of fermentation. It is unlikely that this property depends entirely upon its affinity for water, for its antifermentative power continues when it is considerably diluted with water. Its solvent qualities render it a very eligible addition sometimes to other similar remedies.

Oil of wintergreen is a salicylate of ethyl, and is properly classed among the antiseptics. It is not particularly useful, except to reinforce other agents, for which purpose its agreeable properties may quite properly induce such combinations.

A long list of antiseptics remain undescribed, but the impracticability of adapting many of them to the treatment of disease, the variety and imperfect knowledge we have of others, and the belief that the various classes are already fully represented in those here brought out, are my reasons for ending the list. I wish it to be particularly observed, that there is not yet discovered a perfectly satisfactory antiseptic. The great need of the medical profession to-day is the production of an agent that is at once an energetic poison to micro-organisms, and innocuous in its effects upon man. We must not answer that such a proposition is paradoxical, for among the antiseptics with which we are now acquainted, there is not a corresponding relation between the destroying power they possess upon the higher and lower organizations. The action of many of these agents upon low forms of life is quite unlike the manner in which it proves deleterious to higher grades, and it appears that the fact that the known antiseptics poison both high and low is entirely coincidental. There is therefore no insuperable obstacle in the way of such a discovery, and the revolution that would follow the development of antiseptics to this extent would have never before been equaled by the beneficent discoveries in the interests of humanity.

It is not my design to discuss the treatment of all fermentative diseases, but to review such of them as will involve a consideration of all classes of diseased conditions depending upon the fermentative process. Many of the experiments have been made alone upon the patient, because the morbific agent has never been isolated in the primarily constitutional infectious diseases to a satisfactory extent, and it has been determined that the activity of a septicide upon tangible

microscopic organisms bears no relation to its effect upon the specific organisms that produce the above-described diseases. In fact, the treatment of primarily constitutional diseases in which the etiology is generally accepted as fermentative, has not as yet been successfully conducted on antiseptic principles, if we except the malarious affections. It is true that the course of smallpox, measles, scarlet fever, and other exanthems have been materially modified by the introduction of septicides into the circulation, and it is probable that the organisms that produce these diseases are less hardy than some of those that have been experimented upon in the laboratory. A strong argument for this presumption is that in septicæmia no impression can be made upon the course of the symptoms by any known antiferment. I hope to be able to explain in an appropriate place why such is the case. It is to be hoped that the rapid strides now being made in the study of fermentative diseases and their remedies may soon develop an antidote for each; as, reasoning from the antidotal powers of quinine in one of these affections, it is but fair to suppose that the poison causing the others may be destroyed by an agent, not necessarily more active in its effects upon low forms of life under the microscope than is quinine. Among those that have been given for this purpose are sulphurous acid, free and combined, sulpho-carbonates, chlorine compounds, salicylic acid, salicylate of sodium, carbolic acid, thymol, eucalyptus and some other similar antiseptics. Their use originated in the fact that they were capable of preventing and arresting the putrefactive process without the body. It should be borne in mind that a substance that is very active in arresting fermentation may be much less useful as a remedy against constitutional infection, than one less active but less nocuous to the human system.

Septicæmia is one of the names given to the results of the entrance into the circulation of the products of putrefaction. The relations of this condition to several diseases render it desirable to discuss somewhat in detail the essentials of the pathological conditions present. I believe it is settled now as true that the decomposition of albuminous fluids depends, not upon an inherent property of the elements of dead tissues to separate and recombine, but upon the implantation in those tissues of germs which, after incubation under favoring circumstances, become bacteria, and that the decomposition wholly depends upon the appropriations of these tissues

as food for the new growth. It has long been known that fluids so occupied with bacteria were poisonous when permitted to enter the circulation without filtration through intact tissue, but that such absorption was harmless except by way of a solution of continuity of tissue. Now whatever this means, it proves that the real poison can be removed from putrescent fluids by dialysation. Let us see what is so removed. If a putrescent fluid is filtered through paper, the filtrate will present under the microscope no change except a temporary removal of turbidity, and injected into the circulation is none the less virulent in its poisonous action. If now dialyzed through an animal membrane or porous porcelain, the filtrate will contain no bacteria, nor can it produce septicæmia, but the residue will contain the bacteria, and it still retains the poisonous properties. These are quite conclusive reasons for supposing that the real poison is the living organism, and that the proper name for the advent of this organism into the circulation is bacteræmia.

It is not within the province of this paper to enter into symptomology, and I will only call attention on this subject to the fact that the symptoms of septic infection are never simulated by any other pathological state to an extent sufficient to prevent a complete differentiation; therefore, when these well known symptoms are present, it must be concluded that the blood has become contaminated by putrescent material. If the blood is so contaminated we can not but know that a solution of continuity of tissue has occurred in some part of the body, and is in contact with a putrescent fluid. I think we have reason to suppose that bacteria are not multiplied in the circulation, and that the gravity of the disease is in direct proportion to the amount of poison taken up, other things being equal. Death is produced in bacteræmia by cardiac asthenia. Having considered the pathology of septic infection only sufficiently to devise a rational treatment, it is proper to raise the question whether the propositions advanced are sustained by the result of clinical observations. Basing conclusion upon the literature of the subject, and upon the result of my own observations, I must answer most positively in the affirmative.

There are two principal purposes to accomplish in the treatment of this variety of blood poisoning, and they are, to sustain the heart's action, and so much as possible to cut off the supply of infective material. It will be observed that

I can give no encouragement to the glittering proposition to deal with this disastrous guest of the blood during his life within the blood-vessels. It is very natural to look to those agents that are known to have a peculiarly destructive effect upon the lower forms of life for aid to put an end to so formidable an affection, in a purely rational manner. It must, however, be borne in mind that the power of a septicide depends upon its state of concentration; that is to say that all destroyers of the lower forms of life may be rendered entirely inert by dilution. It matters not how many bacteria are to be dealt with, for an amount of the destroying agent sufficient to kill one animalcule in a given quantity of fluid will kill all, and the whole question of the amount of the antiseptic required depends upon the amount of fluid in which the bacteria float. Let us apply this question to bacteria in the blood. We estimate the amount of blood in a person weighing 160 pounds at 20 pounds. The amount of commercial alcohol required to cause the movements of bacteria to cease in this amount of fluid would be over two and a half pints, which may be considered to be entirely impracticable. The amount of thymol necessary to accomplish the same object would be nearly 140 grains, which amount in the circulation at one time would doubtless destroy the individual. Of carbolic acid it would require at least three ounces, regarding which nothing more need be said. So far as is known to-day, there is no agent that can safely be introduced into the circulation at one time that has the least influence upon bacteria therein. And now what may be considered very important, all clinical experience has demonstrated that the theoretical propositions here advanced are sustained in practice.

Cardiac asthenia may be attributed to two causes: shock affecting the heart's nerve supply, and failure of its nerve nutrition. The first must be overcome by cardiac stimulants; and the second by nerve food. It was thought not long ago, that when whisky and quinine failed to prevent the heart from weakening, all was lost. I wish to invite especial attention to the following plan of prompting the nerves that supply the heart. Of alcohol in the form of whisky, I have nothing to add that is new. Quinine can not be deserted as a stimulant, but I am confident that unless it is given in a soluble form, much of its effect will be lost from non-absorption. The most eligible preparation

for certainty of action, in my opinion, is the bisulphate. I can detect no difference in clinical results between cinchonidia and quinine. Ether is the most rapid heart stimulant known, and to me is indispensable for this purpose. Camphor is a slower stimulant, but its effect is pronounced and lasting. The well known effects of the ammoniacal preparations are also very desirable to obtain. This list is not easily improved upon, nor will it be found often necessary to add to it. But one of the most important accessories to preventing heart failure is the proper supply of nutriment, without which the effects of stimulants can but be of short duration. I attach great importance to the exhibition of beef in a form in which both its stimulating and nutritious properties are retained. It should be well known that any extract of beef made by the aid of heat above 160° F., does not contain an appreciable amount of nutriment, and that death by starvation can not be delayed by its use. No other kinds of food are of any relative consequence, as compared with beef for the purpose of permanently overcoming depressing influences upon the cardiac nerves, but to obtain the desired effects it must be absorbed; to be absorbed it must be dissolved. It will be agreed that digestion by a natural ferment should be the most desirable manner of securing solution. To avoid offense to the taste it is preferable to provide for the digestion within the stomach. This may be readily secured in two ways. First, the beef should be prepared by scraping it into a fine pulp containing no shreds of tissue or fat. It should be preceded by either pepsine combined with hydrochloric acid, or by pancreatine and an alkali. I now prefer the latter. The digestives should be known to be non-saccharated, and of the best quality. A practical formula of the treatment here laid down for cardiac asthenia may be made as follows:

Take of--

Camphor, ...	30 grains.
Bisulphate of cinchonidia, .	30 grains.
Ether, ...	160 minims.
Whisky, to make two fluid ounces.	

Mix and write: Teaspoonful in water every hour or two as may be necessary.

This mixture may be used hypodermically.

Take of—

Carbonate of ammonium, . 160 grains.
Pancreatine (Savory & Moore's), 80 grains.

Mix, make sixteen powders, and write: One powder in a wafer before the beef pulp.

Take of—

Beef pulp, a sufficient quantity.

Mix and write: Teaspoonful (with salt and pepper if desired) every hour or two as may be necessary, alternating with the liquid stimulant.

(*To be continued.*)

Baltimore Academy of Medicine.

REGULAR MEETING HELD DECEMBER 20, 1887.

Reported for the CINCINNATI MEDICAL NEWS.

A CASE OF ANEURISM OF THE TERMINAL BRANCHES OF THE AURICULAR ARTERY.

DR. HIRAM WOODS presented a case of a colored boy, seventeen years old, with an aneurism of the terminal branches of the auricular artery. When he was seven years old his mother noticed a little lump on the front of the ear and another small lump about as big as a pea on his neck. These lumps gave no pain and did not seem to grow for a long time. About three years ago they began to get larger and gave pain. The mother pricked the one on the ear with a pin, when it bled and became empty, but filled up again soon. She repeated this operation several times with the same result. The lump on the neck was scraped open and bled for a long time. When Dr. Woods examined the patient he found that the tumor on the ear pulsated, collapsed on pressure and filled up again when pressure was removed. Pressure on the carotid artery stopped it. It was seen that three or four branches supplied this aneurism and when compression was exercised on both the anterior and posterior auricular arteries, pulsation in the aneurism ceased entirely, but when only one of the above-named branches was compressed the pulsation was lessened but not entirely stopped. In looking into the literature of the subject he found that Buck had never seen a case himself, but recorded several

others. One was a circoid aneurism in which the persulphate of iron had been used. In another case the tumor was large and the hemorrhage profuse. Ligation of the external carotid was performed. A third case reported by Kipp, of Newark, was attributed to a blow. It was the only case he could find which had followed an injury. Roosa mentions a case of Gruening's which was almost a duplicate of the case presented by Dr. Woods. In this case a subcutaneous ligature of the arteries was done. Politzer and others have reported cases which were treated in various ways.

1. By passing through the tumor threads saturated with iron. He considered injections of iron dangerous. 2. Ligation of the arteries and scraping the sac. 3. By using thermo-puncture. In his case he had passed a needle armed with a thread under the arterial branches and found that the pulsation had almost disappeared, although the threads had not been tied. The subsequent treatment was to ligate the vessel and scrape out the sac.

Dr. J. J. Chisolm thought it was very curious to see that the pressure of the thread had almost arrested pulsation before it was tied.

A CASE OF INTUSSUSCEPTION.

The President, Dr. W. C. Van Bibber, then presented an interesting specimen of intussusception of the ileum, with the following history. The patient, a woman who lived in the country, was taken with pains in the right iliac region, and at times these pains were violent. She was for five days under a local physician who gave purgatives, enemas and anodynes with only temporary relief. On the sixth day after a hot, rough ride from the country, she came under Dr. Van Bibber's care. He found her in violent pain, and felt a large, hard tumor in the right iliac region. There was also sensitiveness over the whole abdomen. She said there was no hemorrhage from the bowels and no evacuation from the bowels for several days. He had twelve leeches applied and gave purgatives, and later found that the tumor had almost disappeared. He thought this was singular, and made an examination by the rectum and vagina, and found the tumor deeper down. She had pains after this, and soon vomiting, which was, however, not stercoraceous. She grew alternately better and worse, and finally sank into a collapse and died. The autopsy, thirty-six

hours after death, showed nothing abnormal in the abdominal cavity, except in the portion involving the parts contiguous to the ileo-cæcal valve. There was also a slight general peritonitis, most intense near the point of lesion. The condition of intussusception had been recognized some time before death, but after consultation with Dr. L. McLane Tiffany and Dr. Claude Van Bibber he considered an operation not advisable.

Dr. Wm. H. Welch, at the request of Dr. Van Bibber, demonstrated the specimen. He said that the most common situation for intussusception in the adult is the lower part of the ileum. In this case the intussusception, which is descending, extends to within five inches of the ileo-cæcal valve, the whole part intussuscepted being ten inches in length. The specimen shows well the anatomical relations of intestinal intussusception, viz.: the entering or internal layer, the returning or middle layer (the two constituting the intussusception) and the receiving or external layer or sheath, this being the intussuscipiens. In consequence of the disturbance of circulation due to the displacement of the mesentery there are œdema and hemorrhagic infiltration of the intussuscepted intestine, particularly of the lower seven inches. The entering intestine is much contracted and filled with blood; between the entering and the returning layers (serous surfaces in contact) there is a mass of clotted blood, and between the returning and the receiving layers (mucous surfaces in contact) there is bloody mucus. The intestinal walls are hemorrhagic; in fact, the condition is that of a genuine hemorrhagic infarction of the lower two-thirds of the intussusception.

The most interesting feature of the case is its causation. In the entering layer about three inches from the top of the intussusception is a polypus, somewhat larger than a pigeon's egg, which on microscopical examination is found to be composed of dense fibrous tissue, infiltrated with blood. It is attached by a broad pedicle. The curious thing is that the polypus is not situated at the lower extremity of the intussusception.

According to Leichtenstern's statistics, which are the most complete we possess, a polypus has been found in thirty of about six hundred cases of intussusception. Brinton reached the same result by the analysis of his statistics (a polypus in five per cent. of the cases). Medical literature is full of reports of intussusception depending upon

polypus. It can hardly be doubted, therefore, that a connection exists between polypus and the production of intussusception, and it has generally been considered that the mechanism by which the intussusception is produced is more readily understood in the cases with polypus than in other cases. The accepted and apparently correct explanation is that the polypus by its weight draws down the part of the intestine to which it is attached and invaginates it. One would naturally expect in such a case the polypus to be at the lower extremity of the intussusception, but in the present case the polypus is found not at the lower end but near the top of the entering layer of intestine. How is this to be explained? If we regard the polypus as in any way concerned in the production of the intussusception, and one would certainly be unwilling to reject a causative factor so manifest, an explanation of the manner in which the intussusception was produced in the present case may be deduced from the interesting results obtained by Nothnagel in his experimental work on intussusception. Nothnagel aims first to test the two prevalent theories concerning the causation of intussusception; one theory being that the intussusception is due to a spasmodic contraction of a part of the intestine, the contracted part becoming invaginated into the adjacent intestine, either above or below; the other theory being that intussusception is referable to paralysis of a part of the intestine. Nothnagel's experiments were made upon rabbits placed in a bath of warmed physiological salt solution, the intestines being allowed to float out into this solution, in which it has been shown that the conditions of normal peristalsis are not much disturbed. Nothnagel was unable to obtain any experimental support for the paralytic theory of intussusception, but he was able to produce intussusception by causing spasmodic contraction of a part of the intestine. By applying the electrodes of a Faradic battery to the intestinal wall he was able to cause a firm circular contraction of the intestine at the seat of application. If the electric current was strong, this contraction extended a considerable distance upward, but only a short distant downward. In a large number of cases Nothnagel observed that a descending intussusception was produced, beginning just below the point of application of the electrodes. Within one or two minutes as much as four inches of intestine might become invaginated. The intussusception grew in length, however, not at the expense of the intestine above the entering layer,

but at the expense of the receiving layer. By marking a point on the entering layer at the neck of the intussusception, Nothnagel found that this did not descend or change its relations. On the other hand, by marking a point on the receiving layer he observed that this was gradually drawn upward, apparently by a contraction of the longitudinal muscular coat, and after passing over the bend joining the returning and receiving layers this point descended into the returning layer. In this way the intussusception grew by the receiving layer being gradually drawn over into the returning layer, and the latter in turn being transformed into the entering layer. This explanation of the possible production of intestinal intussusception is contrary to the generally accepted views, but it is supported by the relations of the polypus present in Dr. Van Bibber's case; in fact, this case may be regarded as a most important contribution to our knowledge of the manner in which intussusception may be produced.

It is apparent from the examination of this specimen that if laparotomy had been performed and the intestine in its present condition had been replaced, that it would certainly have undergone necrosis. The only practicable operation when the intestine is the seat of an intense hemorrhagic infarction, as in the present instance, would be the resection of the entire intussuscepted intestine.

DISCUSSION.

Dr. James Carey Thomas, on observing the thickness of the intestinal walls, in the specimen exhibited, asked if this hypertrophy was not very great for the short time.

Dr. Wm. H. Welch thought that the history of this case showed that this condition of intussusception had been going on for some time.

Dr. Christopher Johnston mentioned a case of his own of a lady with violent pains and frequent vomiting and from whom thirty inches of the small intestine were passed by the bowel and the patient recovered.

Dr. Wm. H. Welch said such cases had been observed. Peaslee reported a patient who passed five feet of intestine, and Cruveilhier reported a similar case in which over nine feet of intestine had been passed.

Dr. A. K. Bond thought that the manner of invagination and the relation of the different layers could be partially ex-

plained by the difference of friction between the serous and mucous surfaces.

Dr. Wm. H. Welch thought that the matter of friction could be entirely left out, as the difference was scarcely appreciable in the causation of intussusception. He said that it was very common to find a condition of intussusception at the autopsy when there had been no suspicion of it in life, but the absence of inflammation showed that the invagination had occurred at the time of death, probably during the death agony.

Dr. W. C. Van Bibber, in closing the discussion, spoke of the repeated attacks of colic in his case, and of the diagnosis of intussusception before death. He also spoke of Dr. Warren's (of Boston) experiments of taking out part of the intestine of a dog and allowing the animal to recover.

Dr. James Carey Thomas then reported a case of

PNEUMONIA PRESENTING UNUSUAL SYMPTOMS.

A man, aged forty-seven, was worried and anxious on account of his business and had been complaining for some time. He fainted once in a Russian bath and struck his shoulder bruising it. He went on ailing and feeling badly. His wife noticed that he had fever, and the week following he showed symptoms of typhoid fever. He had no diarrhœa, no pain over his lungs, no expectoration, and little or no cough. All his uneasiness was situated at the pit of the stomach. He had had typhoid fever ten years before, and this was probably not a second attack, although his previous attack had commenced in the same way. On the second or third day some crepitation was discovered in the right lung, and the whole lung became solid. Eight days after, there was defervescence and the patient was very faint. The temperature was normal. Three days after a pneumonic trouble was found in the left lung. Later he did well, had no fever, pulse was normal and respiration twenty, and he had a good appetite. On Sunday he took a cold bath which brought on a pleurisy. The interesting points about the case were consolidation with crepitation and absence of pain, cough and expectoration. In reply to Dr. William B. Canfield he said that in both lungs the normal vesicular murmur could be now heard.

Dr. J. J. Chisolm then reported

TWO CURIOUS CASES.

A young man about seventeen had had his eyelids torn

by the horn of a cow when he was one year old. Dr. Chisolm restored the lid and thought the curious part was that a cow's horn could have torn the lid without injuring the eye.

In the second case a boy was brought to him with a large protrusion from the front of the eyelid. The history was that he had been struck in the eye by a boy who used a sling and buck-shot. Dr. Chisolm simply everted the lid and a large buck-shot dropped out, leaving the eye entirely intact. The accident had just happened.

WILLIAM B. CANFIELD, M.D.,
Recording Secretary.

Selections.

Syphilis of the Endometrium.

BY T. A. ASHBY, M.D., OF BALTIMORE.

THERE are few, if any, of the organs or tissues of the body which are not involved in one way or another in the various manifestations of syphilis, when once the virus of this malady becomes a constitutional infection.

That the syphilitic poison has predilections for certain organs and tissues is a well-known fact. The manifestations of this disease are largely influenced by bodily conditions and constitutional states. Thus anæmia, chlorosis and general debility favor the outbreak of syphilitic lesions, which might have pursued a milder course, or been kept in total abeyance, by a condition of health. Pregnancy is supposed to exercise the same influence upon the syphilitic woman. The character of this influence is modified largely by the age of the syphilis. Thus a woman who contracts syphilis during pregnancy is affected differently from one who contracts the disease prior to conception. In the first case the predisposition to premature delivery is far less potent than in the second.

Secondary syphilis is almost sure to manifest itself in the syphilitic woman when the disease is contracted prior to conception or during the act of conception. Ohlshausen mentions that among 657 syphilitic women, 231 miscarried, while 426 were delivered at term of living and dead children.

Parvin states that at Lourcine 260 aborted out of 416 pregnant syphilitic women.

Abortions induced through syphilitic influence may be brought about either through maternal or fœtal infection. A woman previously inoculated with syphilis will abort more readily than one who contracts the disease during pregnancy, and the danger of abortion seems to be in ratio to the period of infection. Thus contagion communicated at the time of fecundation is more likely to lead to a separation than where the poison has been introduced after the fourth month. Syphilis may be communicated through the father to the fœtus, which may or may not result in its death and separation, and the mother may escape infection. On the other hand, mothers have become infected through the fœtus. A woman may have secondary syphilis and pass through the entire term of pregancy without any manifestation of the disease in connection with the reproductive organs, but this condition of exemption may be regarded as an exception to the general rule that syphilitic women are almost sure to abort.

When pregnancy becomes established in the syphilitic subject it invites a manifestation of the disease at the point of contact of the fœtal and maternal tissues. The decidua may become involved in a condition known as *syphiloma of the decidua*, and the placenta may be so modified in its structure and mode of development as to constitute a condition recognized as placental syphilis. The extent of these changes which take place in the decidua and placenta, indicates the result of the syphilitic involvement. Separation may or may not occur, according to the extent and influence of the poison upon the maternal and fœtal tissues. The placenta may be affected throughout its entire thickness, or only either the maternal or the fœtal portion. When the infection occurs through the mother, the maternal portion is that which is chiefly involved and *vice versa* when the diseases approaches through the fœtus.

The local manifestation of the syphilitic virus in the decidua, as a general rule, to which I know of only two exceptions, ceases as soon as separation takes place, whether by miscarriage or labor at full term. The degenerative changes which follow the termination of gestation seem sufficient to remove the involved endometrium. This process must almost invariably take place. I have been unable to find any references in the literature of this subject to a continua-

tion of the syphilitic manifestation upon the endometrium after labor or miscarriage. If observers have noted this condition, they have been singularly remiss in calling attention to it. That a condition of continual involvement of the mucous membrane at the placental site does occur, my experience with two cases herein related fully confirms.

The condition observed is one of continued proliferation of epithelial tissue—a highly luxuriant granulation, if I may so term it—which returns again and again after removal, resembling in this respect the proliferative exfoliations of an epithelial cancer. The sole origin of this condition I have referred to secondary manifestations of syphilis in the endometrium at the placental site or in this neighborhood. The disease under consideration has followed, in the two cases under my own observation, a miscarriage which was referred to the influence of the syphilitic poison. In case two there was a return of the endometrial trouble, after an interval of three years, from date of former treatment, which could have no reference to any other known causative influence. In my opinion syphilis was the entire cause of an inflammatory condition of the endometrium, which was followed by hyperplasia of the elements of the decidua, a condition which has been described by De Sinéty as a fibroid degeneration of the villi of maternal syphilitic origin. While the latent influence of syphilitic virus should have manifested itself in endometrial involvement, I am unable to explain any more than the various other singular anomalies of this disease, which do not seem susceptible of rational solution. We can the more readily understand the primary outbreak of secondary syphilis in the decidua and placenta during gestation and the continuation of the syphilitic influence upon the endometrium after miscarriage, since here we have the possible retention of placental tissue as a probable nidus for the subsequent outgrowth of granulations. In this instance the influence of the poison is simply continued until overcome by local and constitutional treatment.

The subsequent development of syphilitic lesions upon the endometrium I can only account for upon the general assumption of a local dyscrasia in connection with the lining membrane of the uterus, inviting a concentration of the specific influence upon this membrane, which resulted in hypertrophy of the glandular elements and a degenerative change in the epithelial lining of the uterine cavity.

In case one, in which the local influence was continued

after the separation of the fœtus, the lesions were localized; that is, in seeming relation with the placental site. In case two, the entire lining membrane of the cavity seemed involved, though the process in this case was more tractable to treatment than in case one.

I present the histories of these cases.

Mrs. A., aged twenty-four years, primipara, miscarriage between the fifth and sixth months of pregnancy. Prior to this event she had been treated by her attending physician for an indurated chancre and subsequent mucous patches on her vulva and labia minora. This disease she had contracted from her husband during the early weeks of married life. She was not informed as to the nature of the affection, and has been kept in ignorance of the specific character of her trouble out of deference to her domestic relations. Following the miscarriage, a portion of the afterbirth was retained, but this was speedily removed with the curette. Hemorrhage, however, continued for some five or six weeks, and during this time the curette had been employed two or three times, each time removing lumps of degenerated mucous membrane and vegetations. The uterus remained large, subinvoluted, and in a very relaxed condition, and as a result of frequent intra-uterine applications and curetting, a mild metritis was induced, which was followed by elevation of temperature, violent pain and profuse muco-purulent discharge, more or less tinged with blood. Recognizing the specific history of this patient the family physician made use of anti-syphilitic treatment with almost negative results. Mrs. A. continued to run down, and by copious losses of blood was greatly reduced in flesh and strength. Her physician, losing confidence in his own intelligent treatment of the case, requested me to see the patient in consultation, and then insisted upon my taking entire charge of the case. The diagnosis already established, was confirmed and an effort was made to relieve the distressing symptoms, which at this time were referable to the constant and profuse hemorrhage, subinvolution, uterine colic and general debility. Ergot, which had previously been administered, was again employed. The uterine cavity was carefully curetted and large masses of epithelial tissue and vegetating fungosities were removed. Astringent applications, iodoform, tannin and other agents designed to influence the tissues through local effect, were employed. The result of this method was temporary in its effect. Hæmorrhage would cease for a few days, but the least

bodily exercise would cause its reappearance. The granular condition of the endometrium would again and again reappear after constant curetting, employed at intervals of one or two weeks. The tendency to a re-formation or outgrowth of fungous neoplasms was so constant that it was next to impossible to suppress them for a longer time than a few days. In addition to the local treatment, which was heroic enough to answer every temporary purpose, ergot and iodide of potash and general tonics were administered thrice daily, in large doses. Mercury had been employed by my predecessor, and I simply gave the iodide of potash. This condition of the endometrium continued off and on for over three months, during which time I employed the curette frequently and made constant applications to the endometrial surface. Finally the tendency to proliferation of fungous tissue began to diminish, and I had the pleasure of witnessing a gradual shrinkage in the size of the uterus, a contraction of its walls and returning healthy condition of the endometrium. The menorrhagia, which continued off and on for over four months, finally ceased and menstruation became normal. It has continued so up to the present time, now five months since recovery. The involution of the uterus is not as yet complete, but the uterine cavity is contracted and more is keeping with the normal shape and size. During the early progress of the case the cavity was so large that it would have contained easily a medium-sized orange.

In this case the tendency of re-formation of granular tissue was more marked than I ever witnessed. In some of its aspects the proliferation of neoplasms resembled a malignant degeneration, but this idea was dismissed and the theory of syphilitic influence was accepted as in full accord with the history of the case.

The explanation seems to be this, Under the influence of specific disease the placenta and decidua were primarily involved and separation took place, which resulted in the miscarriage of pregnancy and the removal of the fœtus and secundines. The decidual membrane remained behind involved in syphilitic disease and, in its exfoliation, continued to develop neoplastic tissue. The process of degeneration thus established was continued under the influence of the syphilitic virus. As fast as one set of neoplasms was removed a new set came on to take its place, thus continuing the pathological state of the endometrium. I am convinced the influence of iodide of potash was a potent factor

in the treatment of this case. This was shown on several occasions. It became necessary several times to discontinue the use of the drug in consequence of its effects upon digestion. During these intervals, whether from a bias in my own mind or actual fact, I was led to believe that hæmorrhage was more severe and the recurrence of the neoplasms was more marked. I had never before witnessed a condition of the endometrium at all similar to that present in this case, and I have associated the influence of syphilis with the causation of the condition herein described. In my opinion a non-syphilitic endometrium would not behave in this manner. In cancerous disease a similar condition might be observed, but the recovery of my patient disproves this assumption, whilst her history gives strength to the syphilitic theory. Whilst this case was fresh in my mind a second case came under my care, which confirmed the view expressed above in regard to the influence of syphilis upon the endometrium. The extent of the involvement was neither so great nor so intractable as in the case of Mrs. A., but the history of the patient clearly points to a syphilitic influence extending through a series of years and secondarily involving the endometrium after a lapse of some three years.

Mrs. B., aged twenty-seven, primipara, was married six years ago. Some six months after marriage she became pregnant, and about the sixth month of utero-gestation she miscarried without any assignable cause referable to objective conditions. Subinvolution, menorrhagia and metrorrhagia followed in the wake of the mishap, and for many months the health of this lady was greatly depreciated.

She was treated both locally and constitutionally by several physicians, with the result that hæmorrhage ceased, but subinvolution remained. Her husband, a gentleman of considerable intelligence, had contracted syphilis some time prior to marriage, for which he had been treated with what he presumed to be entire success. Believing himself cured he entered into matrimony only to find the germs of the disease aroused into new activity by the new state. He almost immediately inoculated Mrs. B. with the poison, which became manifest in constitutional disturbance as well as in the local influence upon gestation. Following the miscarriage, which was the first explosive effect of the syphilitic poison upon the part of the latter, both husband and wife were placed under syphilitic treatment by a physician in New York City, to whom they both applied. The wife was kept

in ignorance of the nature of her disease, and, of course, that of her husband, and this ignorance now holds. The successive years of struggle with syphilitic manifestations by husband and wife I shall not discuss here, but the history is not an uninstructive one. Outward manifestations were so successfully combated with anti-specific remedies that a complete check was placed on these. With the exception of sore throat, slight loss of hair and rheumatic pains, the husband has escaped. The wife continued to bear the legacy of an interrupted gestation in the shape of an entailed uterine disease. With the exception of backache, pelvic pain, leucorrhœa and general debility, no symptoms had occurred during the past three years referable to the uterus until six months ago. She had never conceived during this time. About May last, without any exciting cause, uterine hæmorrhage became profuse at the period, and during the intermenstrual period there was a free loss of blood, lasting over two or three days. Menorrhagia and metrorrhagia were both established. This condition continuing, in spite of the use of ergot and other ecbolic agents, the husband became alarmed, brought his wife to this city and placed her under my care. Upon examination the uterus was found to be unusually large, flabby and relaxed. The probe easily entered three and a half inches. The cavity was open and distensible, readily admitting of the free rotation of the sound. The cervix was patulous and eroded, the edges gaping from an old bilateral laceration. The mucous membrane of the cervix and body was highly granular, and bled profusely the moment it was touched. The introduction of the curette brought away large masses of epithelium and fungous vegetations, which clearly accounted for the free flow of blood. Hæmorrhage stopped the moment the curetting ceased; in fact, before it was complete, for the uterus contracted so firmly under this stimulus that the blood supply was immediately cut off. Within less than a week's time there was a return of hæmorrhage and the highly vascular condition of the endometrium reappeared. The curette was again introduced and again a mass of epithelial tissue and vegetation was removed. Under this second curetting hæmorrhage again ceased, and notwithstanding the fact that daily applications of tannin and glycerine and iodoform were made to the entire endometrium, the tendency to reformation of the vegetations went on, and curetting again

became necessary. These neoplasms were again removed in less quantity than in the first instance. Local applications were made to the uterine cavity during the three subsequent weeks before the mucous membrane assumed an approximate normal condition. Iodide of potash was given in fifteen grain doses *ter die* during the entire period, and I have reason to believe its influence was direct.

I am unable to account for the condition of the endometrium observed in this case, save on the ground of the syphilitic influence. Would a non-specific endometritis behave in this way? I confess my own experience has never presented a case at all similar. Whilst I have frequently met with granular conditions of the endometrium following miscarriages, and in the non-gravid state, they have almost invariably responded to treatment when first instituted, and have shown no such tendency to continued re-formation of neoplasms as in the two instances cited. The knowledge of a syphilitic history in these cases induces me to refer the influence to the disease in question, and leads me to formulate the law that in all cases of obstinate and persistent endometrial involvement the condition of a syphilitic influence should be questioned.

I can not but believe that the assumption of a specific influence as an etiological factor in obstinate conditions of endometrial disease may lead to the employment of constitutional treatment, *pari passu* with the local, which may secure results at variance with our expectations. It is well known that many women have specific diseases of which they are wholly ignorant, and we may readily suppose that in a certain number of this class the influence of the specific poison may manifest itself in an impression upon the endometrium, either through repeated miscarriages, through catarrhal states inducing, it may be, sterility, or in conditions allied to those described in the cases herein related. I have no desire to exaggerate the importance of a syphilitic influence as an etiological factor in uterine diseases, but I deem the facts presented of sufficient interest and value to arrest attention and to invite a more careful consideration of this subject than it seems to me to have received. If others have noted this condition and will throw greater light upon the same than has been attempted in this brief communication, then the author will be deeply interested in their contributions.—*Maryland Medical Journal.*

Philadelphia County Medical Society.

THE PRESIDENT, J. SOLIS COHEN, M.D., IN THE CHAIR.

DR. E. T. BRUEN reported from his service in the Philadelphia Hospital, cases of

LAPAROTOMY FOR TUBERCULAR PERITONITIS; PULMONARY CAVITY TREATED BY INCISION; ABSCESS OF THE LIVER.

Case 1. *Abdominal section for chronic tubercular peritonitis.*—A summary of the prominent features of this case shows the following: John B., aged thirty-four. Admitted to the Philadelphia Hospital May 8, 1887. His first departure from health began June 27, 1880, marked by abdominal pain; swelling of the feet followed in September of the same year His previous history showed a marked constitutional tendency to abscesses. He had suffered from a great number of these, including an orchitis, which he considered non-venereal. When examined on admission, dry, pleural friction râles were abundantly distributed over the lower zone of each side of the chest, indicating a dry pleurisy, and there were also the physical signs of diffused thickening of the lower portion of the right lung. The sputa contained numerous bacilli of tuberculosis. The abdomen was very prominent and much distended with fluid in the central portion, but in the hypochondriac regions of each side the course of the colon was defined as a prominent resonant swelling. The liquid in the central portions of the abdominal cavity was apparently confined in a species of sac, owing to adhesions formed between the peritoneum and the colon, since changing the position of the patient did not change the distribution of the fluid. The liver and spleen were also enlarged, and there was marked dullness in the flanks and lumbar regions posteriorly. The abdominal distension rapidly increased, uninfluenced by any treatment which was instituted. The diagnosis of chronic peritonitis was based partly on the physical signs developed during the examination of the abdomen, viz.: its peculiar contour, and the encysted collection of fluid. There was no heart disease, and though there was a small ring of albumen in the urine, by Heller's test, there was no evidence of serious renal lesion. The associated pulmonary process left little doubt that the nature of the inflammation was tubercular. Moreover, there was no history of injury,

nor could any evidence be elicited of chronic inflammatory process in the abdominal viscera which might have had an etiological relation with the peritonitis. These considerations were especially valuable because the patient's general condition was excellent, color good, and appetite unimpaired. On June 18 a gallon of clear serum, with some few shreds of lymph, was withdrawn. Unfortunately, paracentesis was necessitated about every three weeks thereafter on account of the rapid accumulation of the fluid, and the dyspnœa occasioned by it. The pulmonary process being latent, and the general condition of the patient excellent, laparotomy was suggested, and it was thought that possibly by irrigation of the abdominal cavity by means of antiseptic solutions the character of the inflammatory process could be modified and the reaccumulation of fluid prevented. On June 28 the operation was accordingly performed by Dr. Deaver, assisted by Dr. Montgomery. On opening the peritoneal cavity a large amount of serum escaped, but no pus was found.

The peritoneal surface was much injected and dark red in color, much roughened, and covered with flakes of plastic lymph. After drainage, iodoform was dusted freely over the peritoneal surfaces, and the wound closed. The patient's subsequent history was unsatisfactory. Vomiting was a continuous symptom, and death occurred July 6, nine days after the operation.

At the autopsy it was found that an acute attack of peritonitis had followed the operation. Extensive adhesions existed along the course of the colon; the diaphragm on the right side was welded to the liver, and on the upper surface extensive adhesions to the pulmonary pleura had been formed. The right lower lobe of the lung was infiltrated with nodules of miliary tubercle. The left lung was normal.

This case is reported because the number of cases of chronic peritonitis on record is limited in which abdominal section has been performed. While tubercular peritonitis is a most serious disease, yet the process may become latent, as is so familiar in tubercular pleurisies in the course of phthisis. Just as the gravity of tubercular pleurisy depends upon the pulmonary lesion, so the gravity of tubercular peritonitis depends upon the extent of the frequent antecedent lesions present in the bowels and to the impairment of the functional activity of the digestive tract by the adhesions.

The indications for laparotomy would seem, to the writer, to be the same as those which guide us in the inflammations of neighboring serous membranes, the pleura and the pericardium. Incision should be avoided in tubercular peritonitis unless the inflammation is purulent. Not only so, but when the tubercular process is present, even paracentesis should be practiced only in those cases in which dyspnœa, from overdistension of the serous sacs with fluid, threatens life. The danger of operative interference in tubercular inflammation of serous sacs is, that the inflammatory process nearly always becomes purulent.

The etiology of the tubercular peritonitis in this case would seem to have been absorption of bacilli from the intestinal canal, possibly from swallowed sputa, particularly as no ulceration of the bowel could be found. The lesions in the lung were so inconsiderable, when compared with those of the peritoneal cavity, that the possible channel of abdominal infection was unlikely, viz., the inoculation of the pulmonary lymphatics with those of the diaphragm and abdomen. On the other hand, traced from the peritoneal cavity upward, the extensive double pleural process, and the absence of disease of the apex of the right lung, showed that the inflammation probably developed from the peritoneal cavity upward.

Case 2. Drainage of a pulmonary cavity—A man, aged twenty-seven years, was found on admission to the hospital to have all the physical signs of a large cavity in the lower lobe of the left lung. The physical signs were so unequivocal that the cavity was thought to be very superficial, and to occupy a large portion of the lower left pulmonary lobe. The upper lobe was evidently also implicated; the right lung was nearly normal, although at the apex a few moist, crackling râles could be detected.

The history of the case was indefinite, but it was gathered that the disease in the lung came on suddenly about six weeks previously, with pneumonic symptoms. At date, October 20, the patient suffered very much from cough, expectorated freely pus and nummular sputa, which contained tubercle bacilli. The temperature indicated absorption of septic matter; ranging from 100° to 102°. The location of the vomica prevented the antiseptic inhalations from really reaching the part, and the patient could not readily empty the cavity by coughing. After consultation with two of my colleagues, Drs. Curtin and Osler, it was determined to open

the cavity and attempt to secure local drainage. The physical signs of superficial cavity being most intense at the angle of the left scapula, it was decided to operate at this point. Resection of a rib was requisite to obtain working room, as the ribs are close together at this point. On October 27 the patient was placed under ether, and Dr. Janney, assisted by Dr. Porter, removed about one and a half inches of the ninth rib, just within a line drawn from the angle of the scapula. The pleural surfaces were found to be adherent, and the pleural membrane was slightly thickened. It was decided to attempt to enter the cavity with the large needle of an aspirator, and the same was accordingly introduced. Although the physical signs had been so pronounced, yet the needle was introduced two inches into the lungs in several directions without entering the cavity. The punctures caused no coughing, disturbance of respiration, or, in fact, any inconvenience. When the needle was disconnected from the aspirator some little blood escaped, and sufficient air to extinguish a match. Finally a large-sized trocar was introduced in two directions, and it was thought, from the manner in which the front of the instrument moved, that the cavity had been penetrated. A small drainage tube was introduced, and the wound dressed after the antiseptic method. On the following day the dressings were removed, and it was found that at least an ounce of pus had escaped from the sinus. It was decided to enlarge the sinus in which the drainage tube had been placed by dilating it daily with rubber catheters. The second day after the operation, while this dilatation was being practiced, suddenly several ounces of pus gushed through the sinus and escaped externally, and thereafter the sucking was heard, so familiar after an empyema has been incised. It was manifest that the cavity had, at least, been freely opened, for now injection of fluids into the vomica could be coughed up through the bronchi. A blunt probe could be passed seven inches directly into the chest, and the impulses of the heart could be detected along the probe.

There were several points of interest in connection with the details of the operation. The first of these was the fact that the cavity was situated at least two inches from the pulmonary pleura. Secondly, the first two days the cavity was either not entered, or only a minute opening created, and yet no damage to the lung occurred, and the temperature fell a degree and a half.

The propriety of entering similar cavities with the thermo-cautery has been suggested, but when the cavity is situated deeply, may not the mode adopted in this case be more simple? Certainly there were no evil effects in the present case. I would suggest, therefore, the puncture of cavities in the lung by trocar, and then a small drainage tube can be introduced through the canula; the drainage tube can be exchanged for a large one by dilating the sinus. The resection of one or more ribs seems to me an important feature in the operation for the opening and drainage of pulmonary cavities, because retraction of the costal wall is facilitated by this measure. The general condition of the patient has steadily improved since the operation, and at date his temperature is normal, with greatly reduced cough and betterment of general strength. On November 1, he passed under the care of my colleague, Dr. J. C. Wilson.

It is familiar ground to consider the propriety of this operative procedure. I feel sure, however, that the most successful treatment of chronic pulmonary inflammations includes rigid antisepsis as one of its cardinal features. When cavities have formed, their local treatment seems very desirable whenever the strength of the patient at all justifies any hope of success from treatment. In regard to the presence of pleural adhesions, these may be counted on whenever the cavity has attained large enough dimensions to allow operative interference to be considered.

Puerperal Dangers and Deaths.

After reading the various articles in the *Brief*, I will allude to several deaths and several escapes from death in my own hands and in the practice of other physicians.

I have been practicing medicine forty years, and for over half that time have had as large a practice as any country physician could possibly attend to, and yet deaths have occurred.

During this time have never had but *one* case in *my* practice of *retained* placenta. This case was coupled with hemorrhage, and, having cramps in my fingers in endeavoring to open the womb, I was necessitated to have the services of another physician. It took both of us probably twenty minutes to remove the afterbirth, piecemeal, and fortunately both mother and child were saved.

Have been called *eight* times in consultation to remove placentas, where closure of the os uteri was so firm that the family physicians did not succeed in their efforts to open it. In one case, two physicians tried for ten hours, and failed. The closure was perfect, yet in fifteen minutes I removed the placenta—in pieces. Fortunately, there was no hemorrhage.

2. In the last case, a miscarriage had taken place, with a dead fœtus carried two months, and, of course, was much smaller than a living child. It was a case of seven months, and mummification had proceeded as usual. The labor pains of nature trying to remove the fœtus were feeble, and continued so, and, at last, when successful, the os closed tightly. After failure by the family physician, I succeeded in removing the placenta without further trouble.

From these cases I infer that a *speedy delivery* would have prevented the closure of the os and consequent retention of the placenta.

I know of a case where the attending physician reached the house after the birth of the child, and, directing the application of a bandage, said that nature would deliver the afterbirth. It was never done, and the unfortunate woman died from the malpractice of her attendant.

I was called once to deliver with instruments another unfortunate woman, whose pains had continued three days, and without sufficient power to produce delivery. As soon as the front door of the house was opened, the odor of septicæmia filled every apartment. The womb being partially open and the child dead, putrefaction had poisoned the mother's blood. In the shortest possible time, the dead child was removed without any trouble, with the skin peeling off, and the mother nearly expiring. All efforts to rally her failed, after twelve hours of effort—another case of malpractice.

While on this subject, I may as well mention that several times in my life I have been cognizant of cases where death resulted from pure malpractice. A female, being near the time of her confinement, had premonitions of uremic convulsions, which were happily prevented. Her mother, hearing of her condition, insisted on her daughter being confined at her house, and under the attendance of her family physician. When labor commenced, the doctor was sent for, but arrived after the birth of the child and before the delivery of the placenta. Being intoxicated, he went

away, saying that nature would deliver the afterbirth, which was never done. Septicæmia resulted, and death in a few days.

Another physician *told me* he attended a case of obstetrics and went home, and knew nothing about the visit to the case. He was accustomed, in that condition, to attend labor cases. Being too much under the influence of whisky, he made no examination as to the condition of the os uteri —whether it was open or closed. He gave ergot freely, and the result was many cases of children being born dead. This fact is substantiated by another physician, who was sent for in consultation, but arrived too late to prevent the usual result. The community being an ignorant one, the doctor's practice was not at all injured by such results.

Another physician sent for me to deliver the head of a child whose body had been born twelve hours. On arriving, I found the neck of the child dislocated and the muscles of the neck drawn out at double the usual length, and the os uteri firmly contracted around the neck. The slightest effort at removal of the head resulted in the body separating. There was considerable difficulty in the removal of the head, owing to the closure of the os uteri to less than two inches in diameter, and, after being opened to the movable position, of the head revolving about. Fortunately, there was no hemorrhage, and head and placenta were removed. I left word as to directions in regard to the after-treatment, anticipating septicæmia or puerperal fever, which came on two days afterward. The next thing I heard of the result was the death of the woman, which I anticipated from the malpractice of her attendant physician.

3. In conjunction with another physician, I attended a case of placenta prævia, with violent hemorrhage, in a *primipara* of *forty-two* years of age. Removed the edges of the placenta as far as my finger would reach, and used Bauer's rubber dilators—but in vain. The hemorrhage was so great that there was not blood enough left in the mother, after the removal of the child with instruments, to keep her alive more than six hours. Had I another such case, do not know that I would be any more successful.

4. Had a case of puerperal convulsions before delivery. Sent for another physician. We bled and gave chloroform, before the womb could be partially opened and the child removed in pieces. The convulsions continued twelve hours afterward, but with the death of the mother. Don't

know that anything more could have been done to save the patient. Have had several cases quite similar, all recovering. One was a case in which I had no one, nurse nor anybody else, to assist. Gave her chloroform and kept her under it, and delivered the child alive. The convulsions moderated twelve hours after birth, coming on every three or four hours. In the interim, the mother became conscious and made a good recovery, after having had forty-two convulsions. During a convulsion I put a flat cork between her teeth and pressed the point of her tongue back into the mouth. There was some laceration, but not much.

5. Had another fatal case from contracted pelvis, with removal of fœtus in pieces. There was no laceration, and yet puerperal fever set in, from which she died. Had an intelligent physician to aid me.

6. Was sent for lately to see a colored woman who had been in labor over three days, with exhausted pains which could not be increased. The child was too high for instruments to be applied, and the woman died. Another case of neglect—delay through ignorance.

Have had many cases in which the prospects were alarming, and yet the patients recovered; but I do not know that any of those who died under my attendance would have lived under anybody's treatment. I can not see how a doctor can have a large practice for twenty or forty years and not lose several patients, no matter how intelligent and experienced he may be in puerperal cases.—*C. R. Cullen, M. D., in Richmond (Va.) Med. Brief.*

Prof. G. C. E. Weber's Clinic at City Hospital.

REPORTED BY DR. S. W. KELLEY.

THE first case was that of the eight year old boy, described as a case of osteosarcoma of lower jaw, on page 408 of our last report.

PARTIAL EXCISION OF INFERIOR MAXILLA.

He was put under ether, Squibb's stronger ether being used, as is customary at this clinic, a hypodermic injection of one-eighth grain of morphia sulphate and one one-hundred and eightieth of atropia sulphate always preceding the administration of the ether. An incision two and a half inches

in length was carried along the lower border of the inferior maxilla, down to the bone, the periosteum being elevated, and a scoop applied, which easily broke through the bony tumor and exhibited the sarcomatous nature of the growth, extending forward as far as the first molar and involving the whole body and ramus. The incision was enlarged forward and met at right angles by a second incision carried vertically downward from the left angle of the mouth. The soft parts were dissected off below and above the bone, and retracted. A gag of rubber was inserted between the jaws on the right side, the first bicuspid tooth of the left side extracted, and the chain saw applied at that point, and the jaw sawn through. The first incision was then extended backward to the angle of the jaw, the sawn end of the bone was pressed outward and soft parts dissected down to the periosteum from before backward, from its inner surface. The tongue was transfixed by a tenaculum and drawn forward. Upon pressing the bone outward to faciliate disarticulation, it broke, being completely disorganized to a shell by the disease, leaving the coronoid process and condyle attached and rendering the disarticulation difficult. They were removed with a few clips of the scissors, and the hemorrhage being checked, interrupted sutures of silver wire were introduced, a simple dressing of iodoform and gauze applied, and the patient sent to bed.

STENOSIS OF THE RECTUM.

Married woman, aged fifty-six, of somewhat cachectic appearance. She said she had some trouble of the rectum, which began a year before and was very severe for a while, but was not so painful now. Still it gave a good deal of trouble when the bowels moved, as if the bowel was closed up, preventing a passage and also some of the fæces "came the wrong way," through the vagina. Upon examination a recto-vaginal fistula was discovered, the vaginal orifice being situated posteriorly just within the introitus vaginæ, and the rectal orifice some two inches higher up. From just within the sphincter and for a distance of four inches, the rectum was narrowed and its walls thickened and hardened. At a point three inches from the sphincter this narrowing was so great that it was with difficulty the third phalanx of the index finger could be passed through, although the patient was under ether. The whole rectum was somewhat firmly adherent to its surroundings, and at the narrowest point of the

stricture was firmly fixed to the left side of the pelvis. The question was raised whether it was a sequel of simple abscess surrounding the rectum, or was it of a malignant nature. Judging from the absence of continuous pain and the fact that the vagina wall adjacent was not indurated nor the vaginal portion of the fistulous tract infiltrated, it was decided to be of inflammatory origin, and is to be treated by gradual dilation with bougies.

ANKYLOSIS.

A blonde German girl of twenty years, who looked the picture of health, was placed upon the table and gave a good family history. Her trouble was at the left knee. She had always been quite healthy until two years ago she had a sickness with high fever, also much sweating, from which she entirely recovered, excepting the knee. Two students were called to examine it. The knee presented an enlargement upon its inner aspect. "Oh, but, gentlemen, you have not really examined it; you have only just felt of it a little, and, of course, you can not arrive at a diagnosis by that alone. Ascertain the condition of the joint. Does she walk on it? Is it painful? Does it ever swell more than this? As to mobility, can she bend it? Try it now yourself; can you bend it for her? Compare it with the other knee as to size, shape and mobility. Now what do you find out? It is only painful, at present, upon excessive use. She uses the limb right along, but can not bend the knee. Neither can you get any passive motion. To differentiate this from the muscular or false ankylosis present in inflammation of large joints, and due to involuntary contraction of the muscles from reflex irritation, you will observe that all the muscles are relaxed, and still we can not move the joint."

With this history given and this condition present, we conclude that this is a case of true fibrous ankylosis, resulting from inflammation occurring at the time when she had that sickness, with the great pains and excessive sweating, which was probably an attack of acute rheumatism. In other cases of true ankylosis, more especially from traumatic causes, the union is of osseous structure. Now what is to be done in such cases? There are several methods of treatment. One is forcibly to break the adhesions, and attempt, with passive motion afterward, to maintain mobility. But sometimes they are very hard or impossible to break, par-

ticularly in osseous ankylosis, and Mr. Brainard, of Chicago, has devised a method of weakening the bone at the point where it is desired to break it, by the application of the principle that inflammation softens bone. That is, by exciting inflammation by drilling small holes through the bone in different directions at the desired point. The trouble is to get rid of your inflammation once excited, and yet maintain the mobility gained by the operation.

Another method is that of Rhea Barton, by excising a wedge-shaped piece of bone at the outer angle of the ankylosed joint. This method, like the others, is more resorted to where the limb becomes fixed in a flexed, inconvenient or useless position.

Another method is the *brisement forcèe* of Langenbeck, which is a breaking by sheer force of the adhesions at the joint. The way in which Langenbeck happened upon this method of treatment was as follows: He was intending to amputate at the thigh for the relief of a case of ankylosis of the knee-joint where the leg was so fully flexed upon the thigh that the heel was ulcerating the nates. This position making it very inconvenient to perform the amputation, he straightened the limb out by force; in order to get the leg out of the way for the amputation; then observing how well it looked when straightened, he said to his assistants, "We will dress that knee and leave it just as it is, and see what will be the result." The result was a useful limb, and the method being tried successfully in other cases became established. The difficulty of maintaining the joint movable after any and all of these methods of treatment, has led to numerous plans and devices for overcoming it. One Frenchman invented a machine in which the limb could be secured, and so contrived with a hinge at the knee and a series of levers, that the patient himself, by turning a crank with his hands, could make passive motion in his knee. In a great many cases we have to content ourselves with getting the limb into a convenient position and letting it become ankylosed again.

Now this young lady's limb is ankylosed in a straight position, so it is of some use to her. But I propose in her case to endeavor to break the adhesions and secure a somewhat movable joint. The pain she experiences, the tenderness on pressure, and the increased swelling after exercise, indicate that there yet remains some inflammatory action about this joint. First we must remove this inflammation

and endeavor to produce absorption of some of this inflammatory deposit. To this end we will counter-irritate, employing for that purpose the Paquelin cautery.

ERECTILE TUMOR.

A young lady of eighteen presenting a tumor in the region of the body of the left lower maxilla. It had first been noticed in her childhood, but of late years had seemed larger, so as to become quite a disfigurement. Its size was that of half a walnut. It had been pronounced by her physician to be an aneurism, and ligation of the facial artery had been performed, but with no benefit. The tumor was evidently not a bony growth, being quite movable, although it was so close to the bone that its growth had caused the body of the maxilla at that point to be absorbed, producing quite a hollowing of its outer surface and thinning of its inferior border. On the buccal surface the mucous membrane was very vascular. The enlargement was soft, and it was observed that upon pressure being continued for some minutes, the tumor would entirely disappear. No pulsation could be detected. At this stage of the examination the patient began to vomit from the effects of the ether, when Dr. Weber remarked that the tumor immediately distended to more than its ordinary size. It was pronounced a venous angioma or erectile tumor. One of those bundles of deficiently organized veins which become enlarged, and by distending or erecting when extra pressure is put upon the venous system, as in this act of vomiting, coughing and the like, have received this name of erectile tumors. Treatment was proposed by ligating the tumor *en masse*. This was done, subcutaneously, by passing a Peaslee needle in three different directions around the tumor, thus surrounding it with a stout waxed silk ligature, which was drawn tight and tied in a bow-knot, so that it could be drawn still tighter if necessary. Different methods of treatment were discussed, such as injection of tr. ferri perchlor., with the object of exciting an inflammation which would destroy or seal up the enlarged vessels. This method had not been very satisfactory in the hands of the lecturer, was not without danger about the head or face, and certainly not applicable to the case of a young lady, as it was liable to cause worse disfigurement than the tumor. Cautery by needles passed through the tumor is another method. Excision was another method that might be resorted to, in which case it was remarked that if the opera-

tor cut into the tumor he would have most troublesome hemorrhage, while if he cut just around the tumor, it might be excised as readily and with as little hemorrhage as a simple lipoma or other tumor.

ANKYLOSIS OF KNEE-JOINT.

German married woman, aged forty-one. She had borne ten children, had had typhoid fever, and experienced a bad getting up after her last baby, two years ago, but still appeared pretty vigorous in general condition. About a year ago she had an attack of rheumatism, which left her with a stiff knee. Upon examination, the left leg was found to be flexed at an acute angle with the thigh and perfectly rigid in that position. The patient complained of no pain. The joint seemed somewhat enlarged, but not tender. It was considered a case of fibrous ankylosis. The limb was not only useless, but an encumbrance. Ether was administered, and the operator grasping the limb in his arms, forcibly and gradually extended the leg, the bands of adhesion snapping aloud in the process. The leg was brought down to a nearly straight position. The patient was ordered to bed, with a ten pound weight to maintain extension and ice bags applied about the knee.—*Cleveland Medical Gazette.*

Is Leprosy Contagious?

BY E. M. HEISTAND, M.D.

CONSIDERABLE excitement has arisen in Philadelphia over the discovery that two cases of leprosy have been imported to Philadelphia from South America, and, being placed under the care of Dr. Van Harlingen, a specialist in skin diseases, have been kept here in concealment. Dr. Ford, a member of the Board of Health in this city, has brought these facts to public notice, although certain medical men besides Dr. Van Harlingen have known for six or eight months of the existence of the cases in our midst. The unfortunate victims are both women, well connected, and in good circumstances. They are being cared for secretly by their friends, and Dr. Van Harlingen claims that their presence here is no occasion for alarm to the community. On this point we disagree with him, although the opinion of the great Dr. Hebra, of Vienna, is cited to prove that leprosy

is only in a limited degree contagious. "In my opinion," says Dr. Van Harlingen, "the disease is contagious, but in a very low degree, and the fact that a number of lepers have at different times within the last ten years gone in and out of our city without restraint upon their movements and without any case of contagion occurring, indicates that there can be no great danger from the disease."

As a matter of fact, the greatest danger from the disease arises from this false security. The ancient horror of leprosy has, it is true, been modified through the ministrations of science, but physicians of the present day are rather prone to overestimate the result of their skill. The disposition of the day is to claim rather too much for science, to promise more than she can perform. The great Norwegian physicians, Daniellson and Bock, who had ample opportunity to study leprosy, as the disease prevails in Norway to some extent, said, some years ago: "Our whole theory of lepra rests incontestably upon the sad fact that within the bounds where it commits its ravages, it can be made harmless to the rest of the people only by isolation." In a forthcoming book on "Diseases of the Skin," Dr. John V. Shoemaker, also, says: "Humilating and lamentable as the admission is, it must be acknowledged that leprosy is absolutely incurable, and that the safety of the community can only be secured by the segregation of every person who may become affected by it."

In the same work, treating the subject of leprosy in a special chapter, Dr. Shoemaker defines the disease as "a chronic, malignant, contagious, constitutional disease," and goes extensively into its etiology. Pertinent facts at this point are deduced from history. "Forty years ago," says Dr. Shoemaker, "leprosy was introduced into the Sandwich Islands by two Chinese coolies; now, over forty-five hundred persons, or one-tenth of the total population, are victims of the disease. In 1805 there were three lepers on the Island of Trinidad; in 1878 there eight hundred and sixty. In Norway, on the other hand, where a rigid system of isolation is enforced, the number of lepers has decreased fifty per cent. within the past twenty years."

If these facts do not imply contagion, we are at a loss to explain them. Many eminent authorities have divergent theories about the contagiousness of leprosy, but the facts remain as stated. No one has as yet presumed to explain the exact manner in which leprosy is contracted, or under

what conditions. It is true that, in many instances, persons have lived in the most intimate relations with lepers and yet have escaped contagion. But this fact is a dangerous argument against the theory of contagion, for, on the other hand, there have been one or two notable cases in the United States where leprosy has been contracted without any apparent cause or source of contagion. The fact is that we know as yet too little about the disease to proceed with it on the basis of opinion. Perhaps somebody thought the leprous Chinese coolies in Hawaii harmless victims of a non-contagious disease; but leprosy is no respecter of scientific theories. For this reason, we think Dr. Van Harlingen is wrong in carrying his own convictions to the point of keeping lepers in the midst of the community, however sure he may feel of his own ground. In this country, experience with leprosy is so limited that the most skillful are still operating upon a theoretical basis, and, in the face of such conflicting opinion, no man has a right, however honest and earnest he may be, to pursue a pet theory at a recognized risk to the community at large. We say this with a due sense of the terrible fate such views entail upon the victims of leprosy. It is a hard thing to condemn a fellow-creature to hopeless isolation. It is hard to put many a maniac in chains and a straight jacket; but one must suffer for the good of the many, and great emergencies must be met by heroic treatment. It is in our opinion a dangerous and a very wrong thing to permit the secretion of two lepers in our midst, even though the disease is in its incipiency. In Japan, where the disease is well known, the very first manifestations, which are in the nature of obscure symptoms much in advance of the cutaneous affection, are considered sufficient to warrant isolation. The experienced physicians in countries were leprosy is endemic, would almost as soon think of keeping cholera and yellow fever patients in the midst of the community as to fail in segregating any stage of leprosy. Dr. Van Harlingen seems disposed to resent the interference of Dr. Ford in this matter; but, while we appreciate the former's belief in the justice of his methods, and especially his humanitarian motives, we think that the lepers ought to be removed at once beyond the possibility of begetting contagion.—*Medical Bulletin.*

Chronic Peritonitis.

The following case is reported by Dittmer, of Berlin.

Martha B——, eight years of age, was prostrated with all the symptoms of an acute gastro-enteritis. The vomiting soon subsided under ice treatment. Diarrhœa persisted obstinately. Remittent fever occurred, so that, in a week, the child presented the picture of an infantile abdominal typhus. Roseola were not found. Slight tympanites present, with pains, especially marked in the right hypochondrium.

In the middle of the second week tympanites gradually increased, with pain, spreading over the whole abdomen, so that now a beginning peritonitis was diagnosticated, instead of typhus, and suspicions were directed to a probable tuberculosis of the intestines and peritoneum. The fever continued equally remittent. Diarrhœa was still present; the child emaciating rapidly. A fluid effusion could not be ascertained with certainty. This was only possible on the 3d of August, four weeks after the beginning of the sickness. About this time the diarrhœa lessened, also the fever. As the appetite returned, patient improved markedly. The effusion, however, increased. This continued until the end of August, when the fever again increased, the pain and tenderness of the abdomen were greater, the appetite worse. On the 29th of August, the abdomen was enormously expanded; the under edge of liver stood the breadth of three fingers above the arch of the thorax. In the right hypochondrium, about one finger's breadth above the edge of the thorax, in the mammary line, a prominent, red, fluctuating spot about the size of a nickle had formed, under which a defect in the abdominal walls was noticeable. A second similar, bean-sized spot was observed in the linea alba near the umbilicus.

As the first spot increased in size in the next few days, and as the fever increased, with all the characteristics of pyæmia, he decided to incise. On the 2d of September, free incision was performed, when six quarts of pure, healthy and not at all bad smelling pus were discharged.

Through this incision the lower lobe of the liver could be distinctly traced; the peritoneum within and the internal muscular tissue of the abdomen without, presented such a large cavity, for pus accumulation, that its borders could not be ascertained.

Under free drainage, salicylic bandages, and daily dressing with permanganate of potash, the temperature fell to normal in the days following the operation. The threatened second perforation at the umbilicus improved and lessened. Patient recovered rapidly under the circumstances, and was able to leave her room on the 9th of October. The profuse discharge of pus decreased after the operation, the wound united and became smaller. Drainage tube was removed near the end of October, and complete recovery seemed assured, when, contrary to all expectations, the discharge of pus increased during the middle of November. Pain in the abdomen and fever followed, and in the region of the old perforation, at the umbilicus, a second perforation formed, although the incision of the old was still open and the pus discharging unhindered.

Perforation of this occurred November 22d. Upon injection of the operation wound, the fluid would escape through the second perforation, and *vice versa*. The perforation was incised and drained; again the patient improved. The perforation at the navel closed about New Year's. The wound of incision, however, kept open and discharged a very small amount of thin pus.

On the 8th of March, 1880, the probe was introduced into the operated perforation, entering about four inches without meeting any obstruction. Lateral motion of the body to any extent was impossible, however.

As the general health was perfectly normal, and the continual discharge of pus was disagreeable and unpleasant to the patient, the wound showing no tendency to recover, he deemed it advisable to inject tincture of iodine into the fistula, with the hope of obliterating the tract. The first injection was made on the 8th of March; then on the 12th, 19th, 27th of March, and 11th of April; they were borne well, causing no distress, and bringing about the complete and definite cure of the patient on the 15th of April, the day of her discharge.

He has had many opportunities of seeing this patient, who has during this time developed into a blooming, healthy young lady.—*Berlin Klin. Woch.*

Injection of Carbolic Acid for Hemorrhoids.

SONNENBURG, in a communication to the *Berliner Klinische Wochenschrift*, speaks highly of the utility and advantage

of the injection of a concentrated solution of carbolic acid as practiced by American physicians in the treatment of hemorrhoids. He recommends its use, as he has found the method highly serviceable during the last few months in many cases.

For the injection he prepares a solution of carbolic acid and glycerine, 1 : 4. According to the size of the hemorrhoid, he injects from two to four drops of this solution, employing a curved needle which throws the medicament deeper into the base of the pile and with more ease and satisfaction than a straight needle. The operation is comparatively simple with hemorrhoids situated near the external anal edge; more difficult with those seated higher up; nevertheless, with all, it requires some practice.

As a rule, he finds the injections painful the nearer they are to the external anal orifice; the pain soon disappears, however. In operations undertaken on very sensitive females the pain was scarcely noticeable.

On the fourth day, when the first movement of the bowels is obtained, the soft, sloughing hemorrhoid causes no difficulty, neither is there any danger of complications to be feared from the use of this method.

Its advantages, as Kelsey and Lange with justice observe, are the freedom from pain, permitting the patient to follow his avocation undisturbed, and the disuse of chloroform or ether, with its dangers and disagreeable after-effects. He prefers this mode of treatment in all small or medium-sized piles. For the treatment of external hemorrhoids, hypertrophic and easily prolapsed rectum, and extensive, large hemorrhoids, he prefers cauterization, as practiced by Langenbeck, most decidedly.

Ether or Chloroform—Which?

THE choice of anæsthetics is still a mooted question in surgery. Some surgeons use ether alone, others chloroform alone. Some surgeons use both, with more or less discrimination. The number of this latter class seems to be gradually increasing. Unless some new and better anæsthetic than either shall be discovered, it is pretty certain that both anæsthetics will come into general use, and the circumstances calling for the preference of one or the other be definitely settled.

Meanwhile we are bound to weigh the opinions of the most careful observers. In the *Medical Times*, November 15th, the views of Dr. Hunter McGuire are given. From them we abstract sufficient to indicate his views. He says that he is wedded to neither ether nor chloroform. In general, in very feeble people or those suffering from prostration or shock, or loss of blood, he prefers ether. In the very young, or the very old, or in cases where cardiac or renal or pulmonary disease is suspected, he regards chloroform as safer. That both agents kill, all must admit. Which is the more dangerous, he thinks, is undetermined.

Chloroform is the more powerful and immediately dangerous anæsthetic; when it kills it does so by shock, but when the vapor is withdrawn and consciousness returns the danger is absolutely over.

Ether may kill as chloroform does, but is less likely to do so. The danger from this anæsthetic is not over when the anæsthetic is removed. Alarming symptoms or death may occur by cardiac paralysis a few moments after, or by acute nephritis or pneumonia, hours or days after the administration. In acute or chronic diseases of the kidneys or lungs ether is more dangerous than chloroform. Both anæsthetics may produce death if too concentrated a vapor is employed; both may kill during the period of muscular excitement, or by paralysis of the respiratory nervous centers. To give chloroform requires skill and the ability of the administrator to attend strictly to his own business.

In giving chloroform it is better to begin with a small quantity, allowing plenty of fresh air until the patient has become accustomed to its use. The patient should never be alarmed or surprised with too concentrated a vapor. The administration of ether requires less care.

It is unwise to give alcohol immediately before the anæsthetic. It is hazardous to operate during partial anæsthesia from chloroform. Many deaths from chloroform occur in this manner. For operations during partial anæsthesia, ether is the safer. While, as a rule, chloroform is safer in organic valvular disease of the heart, it is more dangerous than ether in a heart weak from fatty degeneration, or from loss of blood, or great anæmia from other causes.

Of all elements of danger from chloroform, fear on the part of the patient is the greatest. Ether is then the safer. If there be much terror on the part of the patient, it is better to administer hypodermically a quarter of a grain of

morphine and one-hundreth of a grain of atropine, and wait fifteen or twenty minutes before giving the anæsthetic. The immuuity of children to chloroform, and soldiers and women in confinement, he ascribes to absence of fear.—*American Lancet.*

The Operation for the Radical Cure of Hernia.

This operation has failed to secure the attention of surgeons to the extent that its importance would seem to warrant. Dr. Donald Maclean is said to have introduced some remarks before a medical society in Detroit, by saying that "he did not suppose the members would be interested in its discussion." He has himself done with satisfaction such operations. Dr. Long, of the Marine Hospital of Detroit, exhibited to the Detroit Academy of Medicine last year, several patients in whom he had by operations cured their hernias. Since then he reports several other cases. Perhaps other surgeons in Michigan have done many cases, but they have not come to the attention of the writer.

In the *British Medical Journal*, December 10, 1887, tables of one hundred and forty-nine cases are given. Dr. W. M. Banks reports sixty-eight cases. Of these forty-four were completely cured. Of the seven reported as partially cured, all the patients report themselves as greatly benefited, and able to wear a truss, which before was impossible. Even the cases of failure are in a much more comfortable state. Dr. Wm. Macewen reports eighty-one cases without any death. In one case the operation failed, owing to an acute attack of hydrocephalis. In a few cases there was slight suppuration, and in one case of femoral hernia a more extended inflammation, owing to the extended dissection called for. All of the patients, before leaving the ward, showed a highly satisfactory result. Of permanent results he says that nineteen were under observation less than a year, and twenty from one to five years. At last examination the results were still satisfactory. It would seem from these statements that the operation for the relief of hernia was safe, so far as life is concerned, and generally successful as far as permanent cure is concerned.

The operation adopted by Dr. Banks is as follows: In inguinal hernia, the sac, after being cleanly dissected out, is opened and all the bowel replaced and adherent omentum

tied and cut away. The sac is then well pulled down, ligatured as high up in the canal as possible, and removed. Finally the pillars of the ring are brought together by two or three silver sutures, which are left in position. In femoral hernia the cleansing and removal of the sac constitute the whole operation, and no attempt is made to close the femoral aperture. In ventral and umbilical hernia use is made of the whole or part of the sac as a kind of plug to close the aperture, which is generally large, and in which it is seldom possible to adopt any means of approximating the edges which seems likely to be permanent.

Dr. Macewen has a different mode of operating and different views on the subject.

Dr. Banks does not think that a person should be subjected to an operation if he can wear with comfort a truss which keeps his bowels securely in position. He distinctly limits the range of the operation to definite cases. When patients can not wear such a truss, he advises an operation for a radical cure. In cases of strangulated hernia the radical operation should be done if the parts are in condition to safely admit of it.—*American Lancet.*

Chloride of Ammonium in the Treatment of Diseases of the Liver.

Surgeon-General W. Stewart, in a communication on this subject to the *Lancet*, October 22, 1887, refers to a former communication of his in which he showed that, in hepatic congestion, a local depletion of the portal capillaries is effected by each succeeding dose of chloride of ammonium, and that this depletion, unlike that obtained by other measures, was not attended with depression. After stating that, with the exception of Professor Aitken, the other men in England who had used the treatment had not given the necessary attention to diet and management, without which successful results could not be obtained, he proceeds to detail the characteristic symptoms produced by the drug in hyperæmia of the liver. These symptoms occur shortly after the medicine is taken, in from five minutes to half an hour. Sometimes a shock is felt, as if "something gave way" in the side; at other times a succession of shocks is experienced in the hepatic region, accompanied, or not, by a pricking sensation ("pins and needles"), or, as if cold water

were trickling down the side; or the action is described as that of "pulling" from one hypochondrium to the other, or from the margin of the right costal arch upward and backward, as if through the liver; or a "clawing," "working," or "gnawing" sensation is spoken of as felt by the patient. With the local actions excited in the liver and related parts, motor impulses are similarly communicated to the muscles of the intestinal canal, thus increasing peristalsis.

In addition to the administration of the drug, the patient should be put to bed, and should have a urinal or bed-pan constantly at hand. No solid food should be given; and wine, beer, or other alcoholic stimulants must be strictly prohibited. Small quantities of milk and beef tea are recommended, and the free use of barley water, as a drink. If diarrhea exist, a pill of two grains of mercury and three grains of Dover's powder, repeated every two hours until four or five are taken, will be found the most effectual means of checking it, without the risk of setting up gastro-intestinal irritation. Looseness of the bowels does not, however, contra-indicate the chloride of ammonium. The only thing which contra-indicates the immediate use of the drug in acute cases is the existence of a combined hot and dry state of the skin, with pyrexia. Under such circumstances, its use should be preceded by a few small and frequently repeated doses of solution of acetate of ammonium, till the skin is rendered moist. Fomentations or hot bran-bags applied to the seat of the pain in the side will be of use in aiding determination to the skin generally.

The author gives the drug in doses of twenty grains three times daily.—*Reporter.*

Evil Effects Produced by the Corset.

In a paper in the New York *Medical Journal*, which is unique in the scientific way in which the subject has been presented, as well as in the character of the illustrations, Dr. R. L. Dickinson, of Brooklyn, lecturer on obstetrics in the Long Island College Hospital, discusses the old question of the corset, and the ill-effects produced by it, with reference to pressure and displacement. His method of study is the following: An inelastic bag is connected with a manometer in such a way that when the bag is held

on a level with the fluid in the tubes of the manometer, the latter registers zero. The bag (kept at the zero level) is introduced beneath the corset, which is then closed, and the readings are made. Two inches of mercury displaced, *i. e.*, an inch on each side, will signify a pound of pressure to the four square inches of bag surface. To obtain the number of pounds' pressure on one square inch of surface, the reading is divided by eight. Without presenting the results of his studies in detail, the following are his conclusions, briefly stated:

"1. The maximum pressure at any one point was 1.625 pound to the square inch. This was during inspiration. The maximum in quiet breathing was over the sixth and seventh cartilages, and was 0.625 pound.

"2. The estimated total pressure of the corset varies between thirty and eighty pounds—in a loose corset, about thirty-five pounds; in a tight corset, sixty-five pounds.

"3. Within half a minute after hooking the corset, such an adjustment occurs that a distinct fall in pressure results.

"4. The circumference of the waist is no criterion of tightness. The difference between the waist measure with and without corsets gives no direct clew either to the number of pounds' pressure or to the diminution in vital capacity. Relaxation and habit seem to affect these factors largely.

"5. The capacity for expansion of the chest was found to be restricted one-fifth when the corset was on.

"6. The thoracic character of the breathing in women is largely due to corset-wearing.

"7. The thoracic cavity is less affected by the corset than the abdominal.

"8. The abdominal wall is thinned and weakened by the pressure of stays.

"9. The liver suffers more direct pressure and is more frequently displaced than any other organ.

"10. The pelvic floor is bulged downward by tight lacing one-third of an inch (0.9 cm.)."—*Reporter.*

TRICHINOSIS.—During an epidemic of trichinosis at Carthage sixty-four persons were attacked, twenty-nine of which were males, thirty-five females; of these twenty-four died, among whom were eight males and sixteen females, a mortality of 37.5 per cent. Former statistics seem to coincide in one point and that is the more frequent occurrence and greater mortality of the female sex.

Book Notices

CYCLOPEDIA OF OBSTETRICS AND GYNECOLOGY, VOLUME V. Gynecological Diagnosis; General Gynecological Therapeusis. By R. Chrobak, M.D., Professor of Gynecology at the University of Vienna. Electricity in Gynecology and Obstetrics. By Egbert H. Grandin, M. D., Obstetric Surgeon to the New York Maternity Hospital. With One Hundred and Sixty-five Wood Engravings. 8vo. Pp. 390. New York: Wm. Wood & Co.

CYCLOPEDIA OF OBSTETRICS AND GYNECOLOGY, VOLUME VIII. Diseases of the Ovaries. By Dr. R. Olshausen, Professor of Obstetrics and Gynecology at the University of Halle. With Thirty-six Fine Wood Engravings. Edited by Egbert H. Grandin, M.D., Obstetric Surgeon to the New York Maternity Hospital; Instructor in Gynecology at the New York Polyclinic; Fellow of the Obstetrical Society, etc. 8vo. Pp. 414. New York: Wm. Wood & Co.

CYCLOPEDIA OF OBSTETRICS AND GYNECOLOGY, VOLUME XI. Sterility: Developmental Anomalies of the Uterus. By P. Muller, M.D., Professor of Obstetrics and Gynecology at the University of Berne. And the Menopause. By E. Börner, M.D., Professor of Obstetrics and Gynecology at the University of Graz. With Fifty-nine Wood Engravings. Edited by Robert H. Grandin, M.D., Obstetric Surgeon to the New York Maternity Hospital, etc. 8vo. Pp. 383. New York: Wm. Wood & Co.

CYCLOPEDIA OF OBSTETRICS AND GYNECOLOGY, VOLUME XII. Diseases of the Tubes, Ligaments, Pelvic Peritoneum and Pelvic Cellular Tissue; Extra-Uterine Pregnancy. By L. Bandl, M.D., Professor of Obstetrics and Gynecology at the University of Prague. And Diseases of the External Female Genitals; Lacerations of the Perineum. By P. Zweifel, M.D., Professor of Obstetrics and Gynecology at the University of Erlangen. With One Chromo-Lithograph and Eighty-eight Fine Wood Engravings. Edited by Egbert H. Grandin, M.D., Fellow of the Obstetric Society, etc. 8vo. Pp. 366. New York: Wm. Wood & Co.

We give above the titles of the last four volumes we have received of the "Cyclopedia of Obstetrics and Gynecology." Our readers will call to mind that, in previous issues of the MEDICAL NEWS, we have noticed other volumes of the same work as they have been published. It will be noticed that the volumes have not been issued in the order of their number.

In previous notices we have described fully the scope of this great work; and it would be but adding another repetition to the several previous repetitions, to again describe it. We will repeat, however, that the Cyclopedia treats fully all the subjects that are found treated in works upon obstetrics and gynecology. It embraces a complete system of obstetrics and gynecology. The normal anatomy and physiology of the female sexual organs are described in the work in their proper place, and the changes produced in them in the course of development from infancy to puberty are fully set forth. Generation is taken up and fully treated. Then the fœtus, having reached its full time in the womb, and ready to begin life independent of maternal nutrition, the work not only explains the whole mechanism of natural labor, even more fully than special works upon obstetrics generally do, but it treats systematically and in full detail all other subjects treated by them. The diseases of women, as will be observed by the titles of the different volumes as we have presented them, are treated far more *in extenso* than is done in any single work devoted to gynecological diseases.

As the Cyclopedia is the product of the labor of not one eminent man, but of a number of distinguished obstetricians and gynecologists, whoever is so fortunate as to possess it, will have for reference the most exhaustive collection of scientific knowledge pertaining to woman that has ever been massed together in works devoted to generation, obstetrics and gynecology.

While engaged in noticing the work it will not be inappropriate, we think, to copy some interesting items of information contained in it on some of the subjects treated. In the introductory remarks on sterility, in the eleventh volume, we quote the following in regard to prevalence of sterility: "Though the statistics are not arranged in figures, which have been gathered through long periods of time and in large countries, we still possess valuable calculations from a number of physicians. Simpson found the ratio of sterile to fruitful marriages to fluctuate from 1:10.5 to 1:8.5.

According to Spencer Wells and Marion Sims, the ratio is 1:8. Chas. West gives the same ratio; Matthew Duncan finds from his researches that fifteen per cent. of all marriages are sterile, which is, therefore, a more unfavorable figure. Although there may be many mistakes in these calculations, this much is certain, that these figures are very nearly correct, and the number of sterile marriages is far greater than it is usually believed to be.

"It is true that the unfruitfulness of marriages does not play any very important part in the fluctuations of the populations of countries and nations; the number of sterile marriages in Germany, whose population is rapidly increasing, is certainly not smaller than in France, where the population increases but slowly. If, therefore, the state remains undisturbed, the results of marriage are in a high degree sufficient."

THE PRACTICE OF MEDICINE AND SURGERY, APPLIED TO THE DISEASES AND ACCIDENTS INCIDENT TO WOMEN. By W. H. Byford, A.M., M.D., Professor of Gynecology in Rush Medical College, and of Obstetrics in the Woman's Medical College; Surgeon to the Woman's Hospital of Chicago, etc., and Henry T. Byford, M.D., Surgeon to the Woman's Hospital of Chicago; Gynecologist to St. Luke's Hospital; President of the Chicago Gynecological Society, etc. Fourth Edition, Revised, Rewritten, and very much Enlarged. With Three Hundred and Six Illustrations. 8vo. Pp. 832. Price, Cloth, $5.00; Leather, $6.00. Philadelphia: P. Blakiston, Son & Co.; Cincinnati: R. Clarke & Co.

The very valuable work of Prof. Byford has now reached a fourth edition, which is strong evidence of the high estimation in which it is held by the profession. Although the number of the works, treating upon the same subjects to which it is devoted, has greatly increased in the last few years, and many of them of high standing, yet it seems to be in as great demand by physicians and medical students as when it was first issued. The reason of this is, undoubtedly, because the author is known to be an experienced teacher, who, while he is progressive in the way of recognizing and adopting such new views and such developments of recent investigations as are in accordance with sound sense and enlightened observation, yet is conservative and

is not disposed to announce as facts theories which have not been demonstrated. The practitioner and student, therefore, feel that whatever is set forth in the volume, as they study the pages, is of practical value. It can truly be stated of the work, that it is a practical text-book by a conscientious, practical man, who is earnestly devoted to the department of medicine of which it treats.

It has been the aim of the author to keep the work fully abreast of the times—that it should present the latest views in obstetric medicine and gynecology. It has been necessary, therefore, to make a complete revision of it, rewriting many sections and adding much new material. New chapters, consequently, have been added on "Practical Observations upon the Anatomy and Physiology of the Female Pelvic Organs;" "Examination of the Female Pelvic Organs" (three chapters); "Displacements of the Uterus" (three chapters); "Affections of the Ovaries" and "Fallopian Tubes;" and paragraphs upon "Oophorectomy," "Tumor of the Broad Ligaments," etc. The chapter on "Lacerations of the Perineum and Pelvic Floor" has been rewritten; as also have Chapters XXIX., XXX. and XXXI., on "Displacements of the Uterus." Quite a number of other chapters have been revised and additions made to them, but we have not the space to mention them.

The revision and additions which the work has undergone will make the fourth edition more acceptable to the profession than any of the previous ones.

THE RECTUM AND ANUS: THEIR DISEASES AND TREATMENT. By Charles B. Ball, M. Ch., Univ. Dub.; F.R.C.S.I., Surgeon to Sir Patrick Dun's Hospital; University Examiner in Surgery, etc. With Fifty-four Illustrations and Four Colored Plates. 16mo. Pp. 410. Philadelphia: Lea Brothers & Co.; Cincinnati: R. Clarke & Co. Cloth, Price, $2.25.

While the rectum and anus are not held in honor like the eyes, brain and heart, but rather are so held in contempt that it is not proper even to allude to them in conversation in polite society, yet they are most important organs—so much so that it is essential to health and happiness that they be in a healthy condition. In fact, there are scarcely any of the diseases of the other organs more important than the affections of these. Rectal and anal disorders have killed

tens of thousands; and, at this time, there are undoubtedly thousands of individuals who have been brought so low by them that the outlook to them is most gloomy; so much so that they would be willing to give half of all they possess to be cured.

There is already a large amount of medical literature devoted to the diseases of the rectum and anus, and there are large numbers of specialists engaged in treating them. But while this is true, yet we feel sure that there is no class of diseases which there are so many physicians incompetent to treat. With the exception of the specialists, and many of them are only quacks, there are but few medical men who have really any scientific knowledge concerning them and can do more than to prescribe a few "set" formulas which they have copied into their note-book. This is not as it should be. A physician should be competent to extend relief in all ailments, whether of organs of honor or dishonor.

Mr. Ball, of Dublin, in this volume, presents to the profession a work that will be found to be a very practical one and a very valuable one. In the preface, in explaining the object of the work, he says: "Improvements in wound treatment within the past few years have produced such important changes in the practice of surgery generally, that in almost all branches of the subject it has become necessary to modify hitherto expressed views, and recast our teaching in several essential particulars. To this general rule the surgery of the rectum forms no exception; and if in the following pages the busy practitioner succeeds in finding a fair account of our knowledge of this subject, as it exists at the present date, the aim of the author will have been accomplished."

Among the very many subjects treated in the work, there will be found the following: "Diagnosis of Rectal Diseases;" "Congenital Malformations;" "Relations of Pulmonary Phthisis to Rectal Fistula;" "Ulceration of the Rectum;" "Irritable Ulcer or Fissure of the Anus;" "Strictures;" "Syphilis of the Rectum and Anus;" "Prolapsus Recti;" "Etiology of Piles;" "External Piles;" "Internal Piles;" "Pruritus Ani;" "Benign Neoplasm;" "Malignant Neoplasms," etc. Of course we can mention but comparatively few of the affections treated.

The volume is a small one, and costs but little, but it contains a large amount of most valuable, practical matter. Every general practitioner should have a copy of it and

study it thoroughly; for by thus qualifying himself to treat an important class of affections, he would relieve much suffering and add to his reputation.

LESSONS IN GYNECOLOGY. By William Goodell, A.M., M.D., Professor of Clinical Gynecology in the University of Pennsylvania, etc. Third Edition, Thoroughly Revised and Greatly Enlarged. With One Hundred and Twelve Illustrations. 8vo. Pp. 579. Cloth. Philadelphia: D. G. Brinton, 115 South Seventh Street.

We have noticed the previous editions of this very excellent work. As a text-book upon Gynecology, we consider that it has no superior. It contains just the information needed by medical students and general practitioners, its descriptions and demonstrations being so plain that they are easily understood. If we had the space to spare, we would make a number of quotations from the work, in order that it might be seen how very practical it is. Students, and young physicians just beginning practice, do not wish a work on diseases of women that is filled with long discussions on the various subjects of gynecology, setting forth the opinions of different gynecologists on disputed points. They want to know what is considered as demonstrated, and what is in accordance with the views of the author as an experienced practitioner. They will find Prof. Goodell's book a work of the kind.

In the present edition, each lesson has been not only carefully revised but very materially enlarged by fresh matter, and six new lessons have been added, together with twenty more illustrations.

HEALTH LESSONS. A PRIMARY BOOK. By Jerome Walker, M.D., Lecturer on Hygiene at the Long Island College Hospital; Consulting Physician to the Seaside Home for Children, etc. 12mo. Pp. 194. New York: D. Appleton & Co.; Cincinnati: Robert Clarke & Co.

The object of this little book is to teach health subjects to young children in a manner that will interest them. Although all technical terms might be avoided and the plainest possible language be employed, yet it would be impossible to instruct a child in hygiene if mere dry details and bare facts were presented to it. But if the attention should be arrested and held by a proper manner and an

interesting style, it will be found that quite young children may easily be taught many of the leading principles of hygiene greatly to their advantage. It has been the aim of the author, therefore, to so appeal to the imagination of the youthful student as to arouse his interest and excite his reasoning powers; and, having accomplished this, direct his attention to subjects regarding health, which he is made to feel affect him.

Hygiene is a science, and the study of it disciplines and strengthens the mind. It is not made up of a great multitude of facts which are to be memorized like the facts in the study of geography. The truths which compose it, in the majority of instances, have reasons for them, which can be traced by processes of reasoning; and thus, as a knowledge of it is acquired, the reasoning faculties are developed, while, at the same time most useful information of a practical character is gained.

Parents will find it greatly to the advantage of their children to put this little work in their hands. We think great good would be accomplished if it were made a text-book in the common schools.

Among the subjects treated in it are the Importance of Air; Airing or Ventilating a Room; Animal Food; Use and Abuse of the Appetite; Value of Cleanliness; Use of Clothing; Importance of Fat in Food; Value of Light; Perspiration; Value of Water as a Food; Effects of Alcoholic Drinks on the Brain and Nerves—on the Stomach and Intestines; on Heart and Circulation; on the Appetite, etc. But it is not necessary to enumerate further the various subjects upon which information is very fully imparted. It will be perceived from the titles of the topics we have mentioned, that in the nearly one hundred and fifty pages there is embraced in its scope instruction in the whole field of hygiene.

Rectal and Anal Surgery, with a Description of the Secret Methods of the Itinerants. By Edmund Andrews, M.D., LL.D., Professor of Clinical Surgery in the Chicago Medical College, etc.; and E. Willys Andrews, A.M., M.D., Adjunct Professor of Clinical Surgery in the Chicago Medical College, etc. With Original Illustrations. 8vo. Pp. 111. Chicago: W. L. Keener, 96 Washington Street.

The authors of this little work are professors in a homeopathic school of medicine in Chicago. Though they are members of the little sugar pill fraternity, yet their apparatus for treating rectal and anal diseases consists of such instruments as Allingham's rectal speculum, blunt- and sharp-pointed bistouries, scalpels, porte-caustics, Van Buren's specula, ecraseurs, clamps, etc. Their medicines are carbolic acid, cocaine, phenol sodique, zinc, etc., which they employ not in infinitesimal quantities.

To say that the work does not contain many directions of practical value in the treatment of piles and of other rectal and anal affections, would not be true. The authors claim that they discovered the methods of treatment of many of the itinerant quacks who roamed over the country announcing their ability to cure piles, and, by publishing them, put an end to their business. The first itinerant pile quack, it is stated, was a young, impecunious doctor of Central Illinois, who having cured a number of cases of piles by injecting them with a solution of carbolic acid in olive oil—one part of the former to two of the latter—with a hypodermic needle, started out on his travels in 1871. From him the plan spread, and quacks sold the secret to one another at high prices. After awhile patients applied to the quacks for treatment who had fistulas, ulcers, etc. As they were nonplused by these, not knowing how to treat them, some fellow got up a "system" which was disclosed in a small printed pamphlet. These pages, with a few instruments, worth about $14, he sold to the quacks for from $100 to $300, exacting a solemn pledge of secrecy.

The work will give full information of the methods of treatment by itinerant quacks, as well as affording instruction in regard to the enlightened modes of regular surgeons —so it says.

Editorial.

A New Year and a New Volume.—We desire to call the attention of our subscribers to the fact that, with the present issue of the Medical News, it enters upon a new year and a new volume—*its twenty-first year* and *twenty-first volume*. When the December number was published, the journal had been in existence twenty years; and, during that period, it never failed in the issue of a single number—

every one of the two hundred and forty numbers were issued and sent to the subscribers.

With the present number the MEDICAL NEWS begins its *twenty-first* year, with prospects good of continuing to be published for another twenty years, although it is hardly probable that the present editor will continue at the helm during all the time of the second twenty years, as he was during the first score of the journal's existence.

It has been the aim of the editor, in past volumes, to make the MEDICAL NEWS a seviceable journal to those physicians who have honored the journal by subscribing for it; and, from the many testimonials received unsolicited, he is encouraged to believe he has largely succeeded. There has been great progress made in every department of medicine during the last twenty years; and, consequently, there has been much that was new, in this time, to put upon record. We believe that a review of the numbers of the MEDICAL NEWS of past volumes, will show that there has been no discovery of importance since the close of the year 1867, that was not duly noted in its pages; so that, if there were any practitioners of medicine that took no other medical journal than it, if they read it well, they could not plead that they had been left in ignorance of this or that advance in medicine, in consequence of the journal not having made any mention of it.

But we have not set out to write an article on the merits of the MEDICAL NEWS. We believe that our subscribers feel that they have received, from year to year, the worth of their money. And it will be our aim, in the future, to make the NEWS an acceptable monthly visitor to every physician taking it—just such a medical journal as we understand the busy general practitioner needs. We intend that its articles shall be of a practical character, setting forth both the progress that is made in medicine, and exhibiting the results of the observation and experience of intelligent men of the profession in the treatment and cure of disease. Lengthy, speculative articles on subjects of pathology, physiology, etc., that contain nothing that will assist a practitioner in treating cases of disease, we will leave for the pages of the large quarterlies, or such journals as devote their pages to such medical literature. We expect to be able the present year to give the NEWS more of our personal attention than has been possible in the past. Can we not hope that our friends will exert themselves to some extent

to increase the circulation of the journal? It seems to us that it would be an easy matter for each one of our present subscribers to send us at least one new subscriber. By so doing our subscription list would be doubled, which should be done.

In conclusion, we regret to say that a larger number than many would suppose, have not been prompt in paying their subscription. Indeed, some are so far behind—so greatly indebted for subscription—that we will be under the necessity, if they do not remit soon, of erasing their names from our subscription book. For a physician, having subscribed for a medical journal, to continue to receive it from year to year, without paying for it, is not right. Such persons surely do not do as they would wish to be done by. We have no doubt they make a great outcry when, having felt that they have rendered a patient important medical service, the patient, on recovery, neglects to pay them. They have much to say about the ungrateful treatment to which they have been subjected; but yet, they themselves will take, year after year, a medical journal that has cost the editor a great deal of labor, and a large outlay of money, and not pay for it.

We hope that all who are indebted to us will promptly remit. Do not wait for bills. If you do not know the amount of your indebtedness, write to us and you will be informed by return mail.

It should be kept in mind that the terms of the MEDICAL NEWS are in advance. We hope all who design to take the journal during the present year will remit right away. We are happy to say that not a few have already done so.

AUTOBIOGRAPHY OF DR. SAMUEL D. GROSS.—As our readers are aware, Dr. Gross, the most distinguished surgeon that this country ever had, was a very prolific writer. Besides being the author of a number of surgical works, he wrote some biographical works, as the "Life of John Hunter," the great English surgeon, and the lives, in one large volume, of a number of eminent American medical men, one of them, we remember, being Eberle, who wrote a work on "Practice" which had a high standing for a long time, or until progress in medicine so advanced that it no longer represented the practice of the time. Within a few months there has been published by his sons, Samuel W. Gross and

A. Haller Gross, a life of the late Dr. S. D. Gross written by himself.

The editors, the sons, state, in the preface, that they consider it due to the memory of their father that death alone prevented him from giving to the work that careful revision which is so noteworthy a feature of his previous productions. We think ourself that it is to be greatly regretted that the autobiographer did not have an opportunity to revise the work; for it might have been, that, having been mellowed somewhat by great age, and some of the angular traits of his character having been rounded off by kindlier feelings begotten by time, he would have omitted from the work some of the very unjust reflections and misrepresentations of worthy professional brethren contemporaneous with himself whom he did not happen to like.

It is generally conceded that Dr. Gross as a surgeon and medical man was a great man. But granting that he was, he was an example, that, while an individual may be endowed with great talents, even though they be overshadowing in a degree, yet the moral nature, which forms a department of the mind, may possess such obliquity as to render it defective. It is not unusual to find men who, in science or in literature or in some other department of knowledge, or as regards some accomplishment, exhibit great intellectual ability, yet their emotive faculties seem dwarfed or lack exceedingly in proper development. Some such are quarrelsome, pettish in their nature, defamatory and abusive when offended by slight causes of offense, unforgiving, unable to bestow credit for merit in others, however deserving they may be; are rendered jealous by the praises received by others, so much so sometimes as to exhibit hatred toward them, when they have in no manner given them any cause of offense. It may seem impossible to some that a great intellect and such an abnormal moral nature could coexist in the same person, but it is true — history exhibits many examples.

But to return to Dr. Gross' autobiography. Not having been published until after the decease of the author, we consider it a great pity that the editors, before issuing it, did not revise it and expunge the gross and unjust reflections upon many of the writer's contemporaries with whom he was brought in contact and with many of whom he was associated—not a few (now dead) having been men of acknowledged talent, of high character and greatly esteemed

by all who knew them. Dr. Gross outlived nearly all who were contemporary with him when he was middle-aged and most active. Those, therefore, who had witnessed and experienced his obliquity of character during the period he was stimulated by ambition, and whom he could have imagined stood in his way, had died long before he departed this life; while those who were composing the profession in his old age, after he had attained the zenith of his ambition, were ignorant of his past eccentricities, and might have continued ignorant if this biography of him, written by himself, had not disclosed them.

But since, through his editors, an exposition of his traits of character has been made, we feel at liberty to quote a few of his criticisms "of men and things." But we do not wish it understood that we consider that all of his descriptions of individuals were incorrect, having been prompted by jealousy. On the contrary, a good many of them we regard as true to the letter—correct in every particular.

As many of our readers will, no doubt, take pleasure in learning something about the early life of so distinguished a man as Dr. Gross, we will quote some facts about him that he mentions in the first chapter. He was born, he states, on the 8th of July, 1805, within two miles of Easton, Pa. His parents were of German descent, and spoke the German language in the household. The English language, consequently, he acquired. He had two sisters and three brothers. His brother, Joseph G., was for many years a clergyman of the Lutheran Church.

While very young his father died, and the homestead was sold—his mother moving into a small rented house a few miles off and a maternal uncle taking charge of young Gross. During his sojourn with his uncle, his chief occupations were going to school in the winter, snaring rabbits in the autumn, shooting birds with a bow-gun in the spring, pitching quoits and playing ball, playing cards in the long winter nights with his uncle and his neighbors. As he lived several miles from the nearest church, it did not often fall to his lot to attend divine worship.

As regards his character as a boy, he says that he never consciously did a mean thing. He states that he had naturally a high moral sense, and an utter detestation of misconduct and crime. He was known throughout the neighborhood as an honest, steady boy, so sober, thought-

ful and quiet, as to have earned, at a very early age, the sobriquet of "judge."

At the age of fifteen he returned to his mother's house and bethought him of some useful occupation during the rest of his life. At that age he knew practically little of the English language, which was a great impediment for some time in his efforts at obtaining an education. The school which he selected to attend was an academy at Wilkesbarre. But previous to this he had begun the study of medicine at the age of seventeen with a country doctor who had nothing but some old, obsolete books, and who gave him no attention. Finding, under the circumstances, that he was making no progress, and what was also most important, discovering that he was very ignorant, he, for the time, gave up his medical studies and resolved to obtain a better education, and with this end in view he found his way to Wilkesbarre.

The Academy at Wilkesbarre was famous in its day, being presided over by Joel Jones, a graduate of Yale College. Latin, English Grammar, Mathematics and Greek were his studies. He had a fearful task in Buttmann's Greek Grammar. His Latin Grammar was Adams', which, by the way, we understand, is used in some of the Catholic schools of Cincinnati, and Lindley Murray's English Grammar. His Greek Lexicon was one in which the definitions were in Latin.

Dr. Gross began the study of medicine in earnest, he says, when he was nineteen years old. His preceptor was a Dr. Joseph K. Swift, of Easton. The understanding was he was to remain with Dr. Swift for three years, inclusive of two lecture terms, and to pay him an office fee of $200, for which Dr. Swift was to furnish him certain books, and to examine him once a week on whatever he was studying. He first took up Wistar's Anatomy, which he mastered in less than two months. He knew every foramen, prominence, and suture. We doubt very much if many young men nowadays begin the study of medicine with such energy. This energetic, persistent, unwearied labor Dr. Gross kept up during the whole of his long life, and to it, no doubt, he was as much indebted for his attainments, and his greatness resulting from them, as he was to eminent abilities. From anatomy he went to surgery, then to materia medica, and finally to midwifery and the practice of medicine. Chemistry he did not study, having been told that it could not be

learned out of the lecture-room without the aid of experiments.

During his pupilage at Easton, besides medicine, he studied French and mineralogy. In the course of a few months after beginning the study of French he could read fluently any ordinary work. He imbibed his taste for mineralogy from his preceptor, Dr. Swift, who had a choice collection of minerals. He spent many of his happiest hours in gathering specimens at a quarry two miles from Easton and in its vicinity. He accumulated a beautiful collection, enriched by domestic and foreign exchanges, amounting to upward of two thousand specimens.

In October, 1826, he arrived in Philadelphia, to which city he set out to attend lectures. But instead of matriculating at the University of Pennsylvania, the institution his preceptor desired him to attend, he entered as a pupil at Jefferson Medical College. It was then a new school. The faculty consisted of Dr. George McClellan, Professor of Surgery, who was the father of the distinguished Gen. Geo. B. McClellan, who, for a time, was commander of the Union forces in the late war; N. R. Smith, Anatomy; John Eberle, Practice of Medicine; Wm. P. C. Barton, Materia Medica; Jacob Green, Chemistry; John Barnes, Obstetrics; and Benj. Rush Rhees, Institutes of Medicine. During his second term the faculty consisted of only five members—the chairs of medicine and midwifery being united, and also the chairs of surgery and anatomy. On entering Jefferson, he became the private pupil of McClellan. He became passionately fond of dissections, and made practical anatomy a special study. During the first half of the session he seldom left the dissecting room before late at night. McClellan was the master genius of the college. He was the founder of the college, and for a number of years its pillar. Every student was warmly attached to him, and called him "Mac." Benj. Rush Rhees is described as a "dapper little fellow." "His lectures," says Dr. Gross, "were largely copied from Bostock's Physiology, and from Foublanque's and Beck's Medical Jurisprudence."

At the end of his lecture course he says that his "mind was well disciplined." "I had not only industry," he continues, "but ambition; my morals and habits were good, and I was a stranger to all amusements. Medicine was the goddess of my idolatry. When, therefore, the time for my examination arrived, I had no misgivings as to the result."

He was one of twenty-seven who received the honors of the doctorate at the close of that session, which was the third session of the college.

On graduating he opened an office in Philadelphia. Very soon after putting up his sign he began the translation from the French of a work on General Anatomy, by Boyle and Hollard, for which he received from the publishers $200. He completed the translation in two months, it being a work of nearly four hundred pages. His next translation was that of Hatin's Manual of Obstetrics, for which he was paid $75. After these translations he translated two other works, Hildebrand on Typhus Fever, from the German, and Tavernier's Surgery. He forthwith began the writing of an original work, entitled "The Anatomy, Physiology and Diseases of the Bones and Joints." It formed an octavo of nearly four hundred pages. There were issued of this two thousand copies, which were all sold in less than four years. All these works were published in about eighteen months after taking his degree. Can any young physician be cited whose industry equaled that of young Gross? We think not. We consider it unparalleled.

We have thus given a pretty full history of Dr. Gross' early life, as set forth by himself, for the reason that we have no doubt that it will prove most interesting reading to many of our readers, who have not the opportunity to consult his autobiography; and also because it has occurred to us that an account of his indomitable energy, unremitting industry and self-denials, when a young man, after determining to enter upon the study of medicine, would be a stimulus to young men of this day, who are students of medicine, to imitate him. It can be easily seen that he was indebted for his greatness in the profession to untiring labor.

Now having gotten to the time, in his life of himself, when he announced himself as a candidate for business, and while waiting for patients, spent his leisure time in translating and writing for publication—for his practice during this time was quite limited—we will skip over a good many of the pages of the autobiography, stopping at the place where we find him in Cincinnati. Through the influence of Dr. Eberle, who had been one of his preceptors at Jefferson College, but who, at the time, was lecturing at the Medical College of Ohio, he secured the position of Demonstrator of Anatomy in that institution. When he left Philadelphia for Cincinnati—it requiring thirteen days to travel the distance in

those days, partly by stage, partly by canal, and partly by steamboat—he had, all told, in money, $237. One hundred of this amount he left on the wayside. He reached the Queen City in October, 1833. The proceeds of his practice amounted the first year to $1,500, which, added to his college receipts, enabled him to live pretty comfortably. Before he left Cincinnati his practice had become large and lucrative. The sale of his books, during the last twelve months of his stay, yielded him an income of $9,000. This was in 1840.

We will copy here, in his own language, what he has to say in regard to a number of the physicians of Cincinnati, and then we will be under the necessity of dismissing the autobiography until our next number, when we may take it up again and make further extracts from it, along with comments of our own:

"Among those who were most prominent at this time as practitioners were 'Charley' Woodward, as he was familiarly called, a man of great mental and physical activity, whom I frequently met in consultation, and who never saw me without telling me how many patients he had already visited during the morning, and how much he had booked the day before; Vincent Marshall, who was distinguished mainly as the husband of a noted belle of her day, and for buttonholing his friends on the street; John Morehead, Professor of Midwifery in the Medical College of Ohio, an Irishman who, although he had lived a half a century in this country, never became a naturalized citizen, and late in life returned to Ireland to inherit a large estate; Wm. Wood, a man of some talent, but an ill-grained, crooked disposition; Israel Dodge, the prying doctor, as he was called, who knew everybody's business better than his own; Dr. Simmons, who afterward settled in St. Louis, where he married his second wife's daughter, and was driven from the town; John Shotwell, who took especial delight in persecuting his old friend, Dr. Drake. Mason and Whitman, the one a fussy man, and the other a dull, heavy one, buried themselves under their practice, and had but a small share of practice. There was an oculist in the city of great pretensions, of the name of Waldo, whose habit was invariably to pray with and for his patients before he operated upon them.

"The society at that time, of Cincinnati, was very good. It contained many cultivated men and women."

A BILL.—Dr. R. C. S. Reed, Dean of the *Cincinnati College of Medicine and Surgery*, has shown us a bill which he proposes soon to bring before the Legislature of Ohio, now in session, for enactment into a law, if it can be brought about. The purpose of it is to provide for the registration of all practitioners of medicine, and the organization of a *College of Physicians and Surgeons*, etc. It is similar, in some respects, to the laws of some of the States regulating the practice of medicine in their boundaries.

We think some of the provisions are not feasible, though they might prove beneficial in their action if they were. Section 2 enacts, that all persons proposing to practice medicine in the State, male and female, for gain, shall be graduates of reputable medical colleges, and shall exhibit to the clerks of the county in which they reside their diplomas, and shall leave with them copies of the same, including all endorsements thereon, which shall be kept on file in the clerks' offices for the inspection of the public. Any person entitled to practice medicine at the time of the passage of the law, not a graduate, shall be allowed to continue to practice. Such, on registering, must subscribe to full particulars in regard to their practice, and swear to their correctness, which statements are to be kept upon file.

Section 5, and some of the sections following, develop a novel feature. It enacts that persons proposing to begin practice in this State, after the passage of this act, holding foreign diplomas, shall exhibit such diplomas to the faculty of the *College of Physicians and Surgeons;* and the faculty being satisfied that the diplomas are genuine and the applicants qualified, shall direct the president of the college to indorse them, after which such persons will be permitted to register the same as those who hold diplomas from colleges of the State.

The *College of Physicians and Surgeons* is to be constituted of all the registered practitioners throughout the State (section 6); and under that name they are to have corporate powers, meet in general session annually, when and where it may be designated by the trustees of the college, to consider such subjects as pertain to the interests of the medical profession and the welfare of society. As there are several thousand physicians in the State—men, women, regulars, homeopathists, eclectics, and quacks generally, having many and contrary interests—it seems to us the annual meetings would be very inharmonious affairs, and the proceedings

would not tend at all to exalt the popular opinion of the medical profession.

The *College of Physicians and Surgeons*, like all other colleges, is to have a Board of Trustees which are to be chosen as follows: The registered practitioners of each county are to meet at a time specified in the bill, and are to organize by electing a president and other officers. These county presidents are to constitute the Board of Trustees of the aforesaid college. The county organizations are to possess corporate powers to sue, etc. They are to have power to discipline members—expelling them and ordering the county clerk to remove their names from his register. The trustees of the college may establish additional county organizations in counties having more than one hundred and fifty registered physicians.

The trustees have power to appoint a *faculty* of the college, of which their president, secretary and treasurer are to be *ex-officio* members. This faculty is not to give instruction in medicine, but its duties consist in inspecting diplomas of foreign colleges and in passing upon the qualifications of such persons as may appear before them. The faculty shall receive no compensation, but the Board of Trustees must provide for their reasonable expenses. (We presume, that by this is meant that they are to pay *reasonable* expenses out of their own pockets, as there are no provisions for them to levy taxes, or to give orders on the State Treasurer.)

Section 10 provides, that all medical colleges which graduate, shall require of students, on entering, a good English education, to be ascertained by diploma or examination.

The annual term of all medical colleges shall extend from September to April (eight months), to be divided into two sessions, the curriculum of study embracing the branches usually taught in medical colleges. Candidates for graduation must have obtained their majority, possess a good moral character, have studied medicine four years, have attended the equivalent of six sessions of lectures, and passed a satisfactory examination on the branches composing a college curriculum.

Those who have graduated at an Ohio college, are only required to register with the county clerk on beginning to practice; those graduating at institutions out of the State, must exhibit their diplomas to the faculty of the College of Physicians and Surgeons, in addition to registering. A fine is imposed upon Ohio colleges not observing the law as

regards the requirements for graduation; but there is no mention made as regards foreign institutions, which, although in good standing, may not, in all particulars, observe the requirements of the act.

While we consider some of the provisions of the bill not feasible—more especially the organization of county medical societies with legislative and corporate powers, made up of registered physicians, and the establishing of a College of Physicians and Surgeons, composed necessarily of inharmonious elements, yet we are in favor of the provisions requiring the registration of all physicians proposing to practice medicine for compensation, and exacting of them certain qualifications, as a thorough English eduation and graduation at some institution requiring attendance upon at least three courses of lectures and four years' study in order to graduate.

CRUELTY TO CHILDREN.—Messrs. R. Ruthven and Benj. Waugh, officers of the London Society (England) for Prevention of Cruelty to Children, state in a report recently made, that in three years' history of the Society they have dealt with 762, more or less, cruel people, for the most part by moral influence. In 132 very bad cases, many almost incredible, they have had to resort to the law, and have brought about 120 convictions. Of the total number of 762 cases, they find that 333 were cases of injuries inflicted by assault, 81 of starvation (some of these of farmed out babies and children insured), 130 of dangerous neglect, 32 of desertion, 70 of cruel exposure, to excite sympathy, in the street, and 116 of other wrongs. Their efforts, they say, have not been confined to London, but have extended to many parts of the country. They do not, they state, interfere with mere parental indiscretion, but only with deeds of cruelty which render child-life unendurable, twenty-five cases ending with the victims' death. When punishment is inflicted, it is always followed by indirect, but real, supervision.

At this child-season of the year, they say, they feel that their work must appeal very powerfully to all generous hearts. Many ladies belonging to the nobility take an active interest in this London Society.

The Ohio Humane Society, whose name until recently was "The Society for the Prevention of Cruelty to Animals" (S. P. C. A.), is doing an excellent work. It not only prevents cruelty by having it punished when com-

mitted, but it educates the people, and especially the rising generation. Its existence, and the frequent reports in the papers of its proceedings, call attention to the fact that cruelty to helpless brutes is wrong and deserving of punishment. When men, lacking in feelings of humanity, are permitted to beat and maltreat with impunity any of the lower animals that are in their power, or in which they happen to have the rights of property, they become impressd with the feeling that they have a right to do so, that there is no wrong in it. And children, never hearing of any one being punished for inhumanity to brutes, beget the notion that cruelty does not apply to dumb animals. It is a great educational means—the knowledge that certain conduct makes one amenable to punishment. We do not believe that there is perpetrated, at this time in Cincinnati, the one-hundreth of the amount of cruelty to brutes that there was before the organization of a society to have it punished.

For a number of years the society, now known as the Ohio Humane Society, gave attention exclusively to cruelty to lower animals, but for several years it has included children in its work. It pays, and has subject to its orders, an officer with police powers, who gives attention exclusively to the detection of cruelty to children. It is astonishing the very many cases of gross inhumanity to helpless little ones he almost daily discovers and extends relief. Many times has he found, huddled together in cellars and garrets, several little ones from a few months old to six or eight years of age, almost naked, shivering with cold, famished with hunger with not a mouthful of food in their reach, and both of their miserable parents stretched upon the floor helplessly drunk. Sometimes cases are found where young, feeble children are sent out by vicious parents to peddle papers or other articles, or to do work beyond their strength, that the proceeds may be used by their parents to buy whisky, or employed in some other evil purpose. The Society has rescued hundreds of children who were suffering cruelties that many could scarcely be made to believe could be perpetrated.

But many may think, that, if these children had not been saved by a humane society, some humane individual would have come to their relief. Such should be reminded of an old but very true saying, "That what is everybody's business is nobody's business." We have seen too many cases of gross wrong that have been permitted to continue unredressed,

because it did not belong to one person to attend to it more than it did on some other person, not to know that the grossest conduct will oftentimes go unrebuked, simply for the reason that it is no one's special business to take it in hand.

It is with us a matter of surprise that, in a great city like Cincinnati, having residing in it so many persons of great wealth, who give large sums for public purposes, an organization like the Ohio Humane Society, which does such a vast amount of good, is continually cramped for want of funds to enable it to do the work it has taken upon itself to do, and, consequently, must not only use the most rigid economy, but is under the necessity to have charitable ladies get up entertaiments, luncheons, concerts, etc., to obtain the means to pay office rent, to pay wages to those who are under the necessity to give the work all their time, as superintendent, several detectives with police powers, etc. It seems to us that a society of this kind should have more money offered to it by half a dozen individuals than it would need.

Tight Lacing.—The evil effects of tight lacing have been commented upon from our earliest recollection; and we have no doubt but that the practice was denounced long before our time. In its issue of December 17th, the *Lancet*, of London, says: "It is hardly necessary to repeat at length the causes which render this abuse of the corset so effectively mischievous. Pathologists have a clean perception of all that is implied in its doubtfully graceful discomfort. The displacements of almost all the organs in the chest and abdomen, the compression of several of these upon the heart and great vessels, and the restriction of breathing space which is thus entailed, have, in their eyes, no beauty, but the sad aspect of feebleness willfully acquired, with the promise of a lifetime as brief as it is practically useless.

Previous to these remarks, the *Lancet*, in the same article, mentioned two cases that had been brought before the coroner, in both of which it was found that tight lacing had caused death. In reference to these it said that it had hoped that sensible reflection upon the bad effects of this injurious custom, as illustrated in the history of a former generation might have impressed upon the would-be fashionable the obvious teaching of experience. "The cases just quoted, however," it states, "are probably but a representative

minimum of a larger number which do not come before the coroner's court, and the evil they exemplify, though certainly less general than of yore, still continues to act as a potent cause of ill-health. It is hardly necessary to repeat at length the causes which render this abuse of the corset so affectively mischievous." It then proceeds to speak of the displacements which are brought about, which we have quoted above.

American Medical Association. — This organization meets in Cincinnati the coming May—beginning its sessions on the 8th. Music Hall, which will seat over five thousand people, has been secured for holding the meetings. Ten contiguous rooms, in the same building, have been engaged for the meetings of committees and sections. Reduced railroad rates have been arranged for with the railroad companies, for the benefit of delegates who will attend. Of course there will be entertainments, some of which will be new and novel in their features.

Every effort will be made by the profession of Cincinnati to make the coming meeting of the Association a great success. Not only delegates and their families, but all who choose to attend, will be made welcome, and no pains will be spared to promote the enjoyment of all who come. The hotels are the best in the United States, and the charges for fare will be very low.

Every physician should take an interest in this national organization. It binds together members of the profession of all parts of this great country. By attending its meeting, the physicians of the East, West, North and South have an opportunity of meeting one another and becoming acquainted. In this way fellowship is promoted and good feeling engendered, and medical men are made to feel that they are members of a great profession. Those not of the profession, too, by these great meetings of doctors every year become impressed with the greatness and dignity of it. Let every physician far and near come.

Death of a Distinguished Physician.—Dr. A. B. Palmer, dean of the department of medicine and surgery in the University of Michigan, died last December, aged seventy-two. Dr. Palmer, although advanced in years, was one of the most progressive and active members in his profession. He was always present at all medical gatherings, and was

one of the most zealous physicians in making the Ninth International Congress successful. At the time of his death Dr. Palmer was one of the most distinguished and honored of American physicians.

Sir Robert Christison says (*British Medico-Chirurg. Jour.*) that in 1820 "the worst part of the hospital discipline at St. Bartholomew's was the regulation—or rather non-regulation—of the pathological dissections. Leave from the relatives of the deceased person was not, as in Edinburgh, a necessary condition. There was, therefore, usually a race between the relatives and the students—the former to carry off the body intact, the latter to dissect it. Thus dissection was apt to be performed with indecent—sometimes with dangerous—haste. It was no uncommon occurrence that, when the operator proceeded with his work, the body was sensibly warm, the limbs not yet rigid, the blood in the great vessels fluid and coagulable. I remember an occasion when Cullen commenced the dissection of a man who had died suddenly one hour before, and when fluid blood gushed in abundance from the first incision through the skin, made in drawing his knife from the upper to the lower end of the sternum in the usual manner. Instantly, I seized his wrist in great alarm and arrested his progress; nor was I easily persuaded to let him go on, when I saw the blood coagulate on the table exactly like the living blood of a man."

With the present year the *American Journal of the Medical Sciences*, published in Philadelphia, by Lea Brothers & Co., becomes a monthly journal instead of a quarterly, which it had been since it began, many years ago.

Eli Lilly & Co., Pharmaceutical Chemists.—We are indebted to this house for a copy of their catalogue and price-list for the year 1888. They are located at Indianapolis, Indiana, and are regarded as one of the most reliable, substantial manufacturing firms of the country. They manufacture and keep for sale to physicians all the preparations used in practice, guaranteeing them to be made of the purest and most reliable drugs. But let such practitioners as dispense their own medicines send to them for a copy of their catalogue at Indianapolis. We have no doubt they will send it with pleasure.

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Original Contributions.

Three Cases of Retinal Detachment Occurring in Myopic Eyes, with Notes on the Significance to be Attached to Diminution in Acuteness of Vision when Ordering Concave Glasses.

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Read before Baltimore Academy of Medicine, January 17, 1888.

THE following three cases of retinal detachment present several points worthy of attention:

Case 1.—Catherine L., age fifty-three, an Irish woman, in good health, applied for treatment at the Presbyterian Eye and Ear Hospital on December 15, 1887, on account of sudden loss of vision in the left eye. She stated that from her earliest recollection she had been near-sighted, but she had never worn glasses for either near or distant vision. Her occupation had been that of a washwoman, and all the fine work for which she had ever used her eyes had been reading the newspaper and doing the family sewing for her husband and three children. The early part of December she had been engaged in hard manual labor in the country, and had taken cold. This cold caused her to have several fits of violent coughing. She had some sewing on hand at this time, and, for several nights, sewed for three or four hours after her day's work. On the morning of December 12th, on awaking, she discovered that she could not see with the left eye. Examination of her visual acuteness revealed

$\frac{20}{200}$ in the R. E. With—6 D. S. (concave) vision in this eye was raised to $\frac{20}{70}$. No stronger or weaker glass, nor the addition of any cylinder helped her more than this. She was able to see Sn, at one at six inches with no glass at all. Vision in the left eye was reduced to faint perception of objects. With central fixation she saw little or nothing, and the field of vision was contracted upward, showing that the lesion involved the lower half of the fundus. Ophthalmoscopically, the right eye was seen to have a marked myopic reflex. Thinning of the choroid was shown by the clearness with which the choroidal vessels could be made out in all parts of the fundus. At the optic nerve entrance a large, white, irregularly-shaped crescent along the outer border of the papilla indicated the presence of a posterior staphyloma due to a posterior sclero-choroiditis. The left papilla and the upper half of the left fundus presented about the same appearance as the fundus of the right eye. From the central spot downward, about as far as could be seen, the retina was detached from the subjacent choroid, and moved about in the vitreous with each movement of the eye. Floating opacities were seen in each vitreous chamber, while the left was decidedly hazy.

Case 2.—Joseph G., twenty-three years of age, consulted me in April, 1887, for sudden failure of his already weak vision. He gave the following history. He had always been near-sighted, but was the only one of a family of ten children who had any eye trouble. He was sent to school at seven years of age. Being deprived of many of the sports of boyhood on account of his near-sightedness, he soon became interested in books, and spent most of the time, not consumed by his school duties, in reading. At twelve, he was taken from school because his vision was so poor that he could not study. After a year's rest he saw better. He then obtained the position of wagon-driver, and kept it for five years. During this period he got along well and his eyes gave him no trouble. At eighteen, he decided to go into business, and first consulted Dr. Frank about his eyes. The doctor ordered him glasses for *distant* vision. Mr. G. thought they were concave $\frac{1}{5}$. Finding that the glasses not only improved his *distant* vision, but also made clearer the contour of *near* objects, he wore them all the time. He obtained a position as salesman in a grocery store, which he kept until the spring of 1886. During these four years he was constantly using his eyes for near work. He always

wore his glasses. He used to hold the book about four inches from his eyes in reading, and bent his head over the counter when making entries in his sales-book. His sight again failing him, he gave up his position in the spring of 1886. In August, 1886, he consulted Dr. Russell Murdoch, of this city. Dr. Murdoch tells me that his case-book states that the left eye was amblyopic, and the right very near-sighted. There is no entry of his ordering any glasses. However, soon after his visit to Dr. Murdoch, Mr. G. again put on the concave glasses—8 D. (concave 4½). These he wore all the time. He had no regular work from August, 1886, until I saw him in April, 1887, but had done a good deal of reading. He was wearing—8 D. S., when I first saw him. Examining his eyes, I found both pupils moderately dilated. The visual acuteness in his right eye without glasses was $\frac{6}{200}$. With—9 D. S. (¼ concave) he obtained $\frac{15}{200}$. The visual acuteness of his left eye was not determinable. He saw faintly objects held a foot or so in front of this eye. No glass gave any help at all. The ophthalmoscope revealed in both eyes a high degree of myopia, large, irregular, white crescents along outer border of papilla with floating opacities in the vitreous. There was a small, retinal detachment in the lower half of the fundus of the right eye. The entire outer and lower quadrant of the left retina was detached. I advised him to throw aside his glasses, and not to make any attempt to do near work. I saw the patient from time to time until August, 1886. During this time his vision certainly became no worse. He thought it was somewhat better in the right eye. I met him on the street during November, when he told me he had not worn glasses since I saw him, had refrained absolutely from any attempt to use his eyes for near work, and knew he could get around better and see more clearly than last summer. I have made no ophthalmoscopic examination since August.

Case 3.—Clara N., sixteen years old, applied for treatment at the Eye Hospital in August, 1886. She came under my care as a refraction case. I obtained from her the following history: She had been near-sighted as long as she could remember. She went to school when seven years old, and at that time was able to read, so her mother told me. She studied a great deal, and learning to crochet, spent her spare time doing this work. Her book and her work were always held about four inches from the eyes. She left school at thirteen, and lived out as house-girl for a year. She con-

tinued crocheting at night during this time. Thinking she could make more money by sewing, she gave up her situation in August, 1886, and obtained employment in a coat-house. She worked here ten hours daily for three months, and often spent her evenings in reading or crocheting. While at work, the goods were so heavy that she held them in her lap, and leaned over to get near enough to see. In November, 1886, she again obtained a position as servant, and kept it until May, 1887, when she went to sewing again. This latter work she continued against advice, till compelled to give it up in December, 1887. When I examined her eyes last August, I found her visual acuteness about $\frac{6}{200}$ to $\frac{8}{200}$ in both eyes, the right being, possibly, a little weaker than the left. I was unable to improve this distant vision. With—12 to 14 Diop. (concave 3 to 2¾) she thought the large "A" (to be read at 200 feet) was "clearer" at a distance of ten feet, than it was without any glass. She could read Sn. No. 1 at 3½ inches. No weak or medium concave lens enabled her to read the type at a greater distance. With strong concaves, she thought it looked clearer, but there was no improvement as to distance. The ophthalmoscope revealed high myopia, with thin choroids, large crescentic atrophies near each papilla, and floating opacities in the vitreous. I refused to give her any glass, told her mother of the danger in which I considered her child's eyes to be, and urged the girl to give up sewing and do domestic work again. I also examined the eyes of her mother and a sister who accompanied the patient. Both were myopic, with visual acuteness reduced. The mother's eyes showed crescentic atrophies of choroid, while congenital myopia was the main trouble with the daughter. The girl and her mother disregarded my advice, and the former continued to work ten hours daily at sewing. I next saw her on December 28, 1887. She said that the morning before she had noticed that the right eye seemed "weaker than ever." Still, she went to work, and sewed her ten hours, although it caused considerable pain. The morning of the day of her visit, her left eye also became "weaker," and this brought her to the hospital. The ophthalmoscope revealed a small retinal detachment in the lower half of left fundus, and a very large one in the same position in the right eye.

These three cases present in common one very important feature: A high degree of myopia dependent upon a posterior sclero-choroiditis. The *near-sightedness* in this disease

is the symptom which usually prompts the patient to seek relief; for in most cases myopia is only a symptom of serious changes going on within the eye. In our standard text-books we find progressive myopia (a term synonymous with posterior sclero-choroiditis) set down as one of the most frequent causes of retinal detachment. Other causes are injuries, results of inflammatory process in the retina or choroid (the latter not being necessarily staphylomatous), and the pulling of the retina away from the choroid by the shrinking of the diseased vitreous; the latter eventually finding its way between the choroid and the retina through a small perforation in the latter membrane, and causing the detachment. ("Leber, quoted by Meyer.")

Webster, of New York, has published a case occurring in a highly myopic individual after a violent fit of coughing. (*N. Y. Medical Journal*, May 14th, 1887.) The trouble is usually met with in persons beyond middle life, and atheromatous degeneration of the choroidal vessels is supposed to be a frequent cause. Meyer says the detachment is produced by "a serous effusion from the anterior surface of the choroid," that in sclero-choroiditis "there may be a tendency to effusion from the choroidal vessels, or that it may simply be the result of elongation of the eye-ball."

As regards treatment of retinal detachment, it must be admitted that none of the means usually employed give any result of practical value. Diaphoresis, tapping of the retinal sac through the sclerotic, prolonged confinement to bed in the dorsal decubitus, with total exclusion of light, these and other means have their advocates, but none of them produce, apparently, much improvement. Against this and other serious complications of posterior sclero-choroiditis, the eye surgeon can often secure prophylaxis by his management of high degrees of myopia, and in the apparently easy task of fitting concave glasses, he must bear in mind that a mistake in the selection may involve most direful consequences to his patient.

The two most potent factors in the production or advance of posterior staphyloma are increase in the *intra-ocular* tension, and pressure from the *outside*. These two conditions always accompany work on near objects. The former is brought about by the choroidal and ciliary hyperæmia which always accompanies the effort at "accommodation," and the latter by the action of the internal recti muscles in securing the necessary conveyance. The nearer the object

to the eye the greater the accommodation and the more intense the hyperæmia. The same nearness increases the amount of conveyance necessary, and hence increases the pressure from the extrinsic eye-muscles. It is only to enable our patients to hold their reading matter or other fine work at a greater distance from the eyes that we even order concave glasses for near work. When they do this, they accomplish good; when they do not, they become a source of incalculable mischief.

As a result of near-sightedness, the myope is apt to have a spasmodic contraction of his ciliary muscle, added to his other difficulties, and, as the organic changes progress in the fundus of the eye, his visual acuteness becomes diminished. Clinically the former of these symptoms is indicated by an increase in the near-sightedness; the latter by our inability to secure for the patient normal distant vision with *any* concave lens.

When the visual acuteness is thus impaired, it is often dangerous to give the patient any glass for near work. Von Graefe lays it down as a principle "never to give concave glasses for reading and writing, *or only very weak ones*, to persons, affected with myopia, and who no longer possess *normal acuteness of vision.*" (Text-books of Donders and Meyer.) Meyer, of Paris, and other Continental authorities give their assent to this rule. It is easy to see why concave glasses for near-work increase the danger to a myopic eye with impaired visual acuteness. Nature has provided that the myope shall have a large retinal image of what he *does* see, as, possibly, a compensation for the *shortness* of his vision. When it is remembered that concave lenses *minify* the retinal image, at the same time that they enable the myope to hold his work at a greater distance (on account of their *dispersive* power), the source of danger is at once apparent. On account of diminished visual acuteness, the patient can not put up with the minification of the retinal image. Consequently he will continue to hold his work at the usual distance, and call on his accommodation to overcome the divergence of the concave lens. Uveal hyperæmia results, and, if allowed to continue, increases the staphyloma. The same authorities allow these patients the occasional and interrupted use of strong concave glasses for distant vision. Even these, however, become a source of danger when the accommodation is weak, or when we can not be sure that the patient will only use them legitimately. Any eye sur-

geon of experience knows that it is often difficult to keep myopes from wearing their distance-glasses all the time. This keeps the accommodation constantly acting, and thus adds to the danger.

This rule of Von Graefe's is certainly not uniformly practiced by American surgeons so far as I have had an opportunity of observing. One of the highest of English authorities of the present day, Morton, of Moorefield's Hospital, says: "The weakest glass that neutralizes the myopia, and gives the *best* vision, *whether this be* $\frac{20}{20}$ *or less*, * * * may in all cases be ordered for distant vision. Such glasses may also be given for *close work*, when with *good accommodation*, the myopia does not exceed about 6 D. or 8 D. ($\frac{1}{4}$.)" (Morton, Refraction of the Eye.) Donders (quoted and approved in Meyer's text-book) only allowed the same glass for distant and near vision if the myopia did not exceed 2 D. (—18½); and not then, unless the accommodation was strong enough to overcome the divergence of a 8 D. lens (—4½), after the myopia had been corrected, and the fundus was healthy. In his own book on the "Accommodation and Refraction of the Eye," Donders, under the heading "when the myopia is slight in reference to the range of accommodation, and the eye is otherwise healthy," advises the constant use of the glass which corrects all the myopia, only when the "myopia amounts to a fourth or third of the accommodation." I believe that strict adherence to Morton's rule would, with high myopes, be attended with great danger to the eyesight, except in the rare cases where a young person has such a high myopia as 8 D. (4½), and at the same time has normal accommodation and a healthy fundus.

If we adhere strictly to Von Graefe's rule, we will often compel our patients to practically give up near work. This may at times be necessary; but I believe there are many myopes with diminished visual acuteness who may be safely trusted with glasses for near work, provided that (1) the vision is still sufficiently acute to enable them to see clearly the *diminished* image produced by the concave lens at a *greater* distance from the eyes than they can see the print *without glasses;* (2) that the improvement in the distance is great enough to bring the print near the normal point for healthy reading, about 12 to 15 inches; (3) that the accommodation is still strong, and finally that the patient is sufficiently intelligent to be trusted. Even then these cases of

diminished visual acuteness should be carefully watched, and not allowed to keep a prolonged strain on their accommodation by near work. The following case, taken from my case-book, will illustrate the above:

Mr. C., twenty-seven years old, journalist. Visual acuteness without glasses reduced to $\frac{10}{200}$.—7 D. (concave 5½) gives him clearly $\frac{15}{30}$, and a few letters on the line to be read at twenty feet. Neither spherical nor cylindrical lens further impaired his distant vision. He read Sn. No. 1 at 4½ inches. Now, by the rule quoted from Von Graefe, no glass, or a very weak one (0.25, to 1.25 D.), should be given this patient for near work. Very weak glasses did not help him at all. With—2.5 D. (concave $\frac{1}{15}$), however, he enabled to see Sn. No. 1 at 12 inches, and read it comfortably. His eyes both showed posterior staphyloma, strictly limited. I had no hesitation in ordering this glass for near work, and believe there is less danger of his myopia progressing than there would be if he had no glass, and worked at 4½ inches, even if his visual acuteness is normal. And yet I would not be understood as favoring the use of concave lenses for near work in cases of diminished visual acuteness, except under well-defined conditions. To make its use justifiable the glass must enable the patient to do his reading at nearly the healthy distance from the eye, and must not be used at a less distance. The greater the loss in visual acuteness, the less improvement are we to expect in this particular. When we do not get it, the patient injures his eyes more by having than by not having concave glasses for near work.

In hospital practice this latter fact must have an important influence in deciding whether or not we will even give a patient such improvement as we can for *distance*. I saw a few weeks ago at the Eye Hospital a sewing woman of thirty-three who had not over $\frac{1}{200}$ distant vision. With—2½ she obtained $\frac{20}{70}$. With no glass, she read Sn. No. 1 at 3½ inches. The glass (— 2½) which gave her the best distant vision enabled her to read Sn. No. 1 at 5 inches only. The ophthalmoscope showed large myopic, irregular crescents. This woman had, she told me, been given — 2½ by a prominent specialist in Philadelphia to give her some help in her distant vision. Finding that it enabled her to read and sew at a little greater distance from her eyes than she could without glasses, she had been using them constantly for sewing for two years. She had, during this time,

become more near-sighted. Retinal detachment or glaucoma is almost certainly in store for this poor creature, if she continues this course. The advice to lay aside her glasses for near work I have no idea will be followed. Hence the necessity of judging of the probability of our being obeyed. It may be well enough to give our myopic patients, with very little visual acuteness, what help we can give them; but if they are apt to do themselves further injury with the glasses, we had better not help them at all. If they are young, it is our duty to urge them to seek such employment as will entail the least strain upon their accommodation. Myopia usually makes its greatest progress between the ages of eight and twenty. Throughout this period one who has an acquired or hereditary tendency to myopia should be made to avoid severe eye strain as much as possible, should be kept under close observation, and made to stop all near work if the myopia becomes progressive.

A word should be added with reference to the direct action of the ciliary muscle in determining the *degree of myopia*. It is well known that when the eye is examined under the influence of a mydriatic, the glass then indicated is not strong enough to give the *acutest vision possible* after the ciliary muscle has regained its power. This "dynamic" myopia (Landolt) usually amounts to from 0.5 D ($\frac{1}{48}$) to 1.5 D. ($\frac{1}{24}$) according to Morton, who *adds this* to the strength of the glass indicated at the previous examination. Landolt, on the other hand, advises that the "real" myopia be taken as the basis of calculation. Mydriatics are not, so far as my observation goes, usually considered to be nearly as necessary in testing myopic as in testing hypermetropic eyes; and yet, it is a common experience to find patients in whom the myopia has been corrected one year, returning the following year with an increase in the apparent myopia, and a lessened range of accommodation. The correction of this "dynamic" myopia necessitates an excessive effort on the part of the ciliary muscle, this soon leads to *spasm*, and prolonged ciliary hyperæmia with its attendant evils is apt to result. The *diagnosis* of this spasm becomes, then, a matter of great importance. The ophthalmoscope and the action of atropia—the latter sometimes prolonged—are the means usually recommended for diagnosis and treatment. I believe that this condition is also indicated by inability on the patient's part to read fine print at a distance from his eyes, as much greater than has

been his custom, as we have a right to expect from his visual acuteness. When we put on the glass indicated as the correct one for near work on the basis of his apparent myopia, the amount of convergence necessary is greatly lessened, and with it the amount of accommodation should be less. Still, he holds the print at practically the same distance. This suggests, it seems to me, that his ciliary muscle is unable to relax. He should be treated not by allowing him to wear the glass which gives him good vision, but by other means adapted to remove the spasm.

In the treatment of myopia there are many other considerations just as important as those I have dwelt upon. The one to which I have given the greater part of the paper—the use of concave glasses for near work when visual acuteness is diminished—is a factor in the problem of treatment of vast importance, and one to which not enough attention is paid in practice. This and the power of accommodation are two elements in vision which stand in close relation to the progress of myopia, and they should receive a large share of our attention when we prescribe concave glasses.

Baltimore Academy of Medicine.—Regular meeting, held January 17, 1888, the President, W. C. Van Bibber, M. D., in the Chair.

Aneurism of the Auricle.—Dr. Hiram Woods, referring to his case of *Aneurism of the Auricle*, exhibited at the last meeting, said that he had ligated subcutaneously two more small arteries on the posterior surface of the auricle. This did not appreciably lessen the pulsation. The boy went home just before the new year, and returned last week. Inasmuch as firm pressure above and below the aneurism stopped the pulsation almost completely, it was thought by all the gentlemen who saw the case at the hospital, that the simplest plan would be to control the blood supply by firm pressure, and then open the sac. On Friday afternoon this was attempted, and while Dr. Harlan compressed the supplying vessels above and below, Dr. Woods opened the sac, which turned out to be a circoid aneurism. A part of the sac was dissected out. There was considerable loss of blood in spite of the pressure. The remains of the sac were obliterated by firmly closing the wound with sutures. There was still considerable oozing through the lips of the wound, which was stopped by passing a ligature into the cartilage in such a way as to catch an artery which ran

through this structure. There has been considerable inflammatory swelling since. The ligatures were all removed this afternoon, there is no pulsation in the tumor, and healing will now probably go on nicely.

Dr. S. T. Earle asked if electrolysis had not been used in this case.

Dr. Hiram Woods said it had been used by Prof. Chisolm once, but not with any apparent success. He thought the negative pole had been applied to the aneurism.

Dr. S. T. Earle thought that the positive pole produced a firm clot.

The Careless Use of Pessaries.—Dr. T. A. Ashby said that a patient came to him complaining that her pessary did not fit. He examined her and found that pressure of the pessary had given rise to a papillomatous growth on the posterior vaginal wall. It looked at first like a malignant growth, but he thought it would disappear under local treatment. He stated that the possibility that such a growth could become an epithelioma was to be thought of. He mentioned the great fault of allowing a patient to wear a pessary too long without having it removed. A few months ago he had removed a pessary which a woman said she had worn for, at least, twenty years. It was old and encrusted with the secretions, and was so far out of date that it bore no resemblance to any modern instrument.

Dr. B. B. Browne said that he had frequently seen cases where pessaries had remained quite a long time in the vagina, so long that deep sulci were formed in the vaginal tissues, in which the pessaries had become imbedded. Sometimes the pessaries had become completely buried in the tissues, which caused considerable difficulty in their removal. After removal, however, the parts soon returned to a normal condition. In one case which he recalled in an unmarried lady, the pessary had remained nearly twenty years. She was not aware that she was wearing it, as the physician who introduced it had only made one vaginal examination, and had not informed her of its introduction. He thought that a patient should always be told that a pessary had been used, and cautioned as to the necessity of its removal. In many cases, however, the neglect was on the part of the patient. Dr. Browne referred to a case which he had recently seen reported, in which a cotton tampon had remained in the vagina twenty-nine years, the patient

not being aware of its presence, and which, upon its removal, was encrusted with a complete shell of lime salts.

Dr. S. T. Earle thought that small vegetative and granular papillomata were not infrequently found in the vagina from pressure of the pessary.

Dr. Hiram Woods then read a paper entitled, "Three Cases of Retinal Detachment Occurring in Myopic Eyes, with Notes on the Significance to be Attached to Diminution in Acuteness of Vision when Ordering Concave Glasses."

The discussion was postponed until the next meeting.

WILLIAM B. CANFIELD, M. D., *Reporting Secretary.*

Antisepsis in the Treatment of Disease.

BY D. W. C. WADE, M.D., HOLLY, MICHIGAN.

[*Concluded.*]

IN view of the fact that cardiac failure in acute diseases is the frequent source of fatality, certainly nothing can be more important than to add to our resources in such emergencies. I hope to have shown an improvement over quinine, whisky, milk, and extract of beef, which constitutes the plan in general use even at the present time. Inasmuch as our topic is non-surgical, the treatment of the source of infection in bacteræmia will be discussed in connection with those diseases having septic complications.

Typhoid Fever.—A disease having for its pathology, inflammation and ulceration of Peyer's patches, caused by a specific poison, having (perhaps) a similar action on no other part of the body, and generally complicated by septic infection. This definition is mine. The constitutional symptoms are those of septicæmia, and they never occur without facilities for septic infection. Were these ulcerated glands within easy reach, with our present knowledge of antisepsis, typhoid fever would be rendered of little consequence. Both the organism that preys upon this portion of the intestine, and the ingress of putrescent fluid, could be readily controlled but for the inaccessible location of the disease. In this affection it would appear that the blood poisoning occurs by the more or less continuous travel to the circulation of small colonies of bacteria. The symptoms indicate this, and the local facilities for infection appear to substantiate this proposition. The treatment for

the constitutional condition is precisely that for septic infection as heretofore described. Death is largely the result of the blood poisoning, but sometimes is caused directly by the local lesion. There should be two aims in the local treatment: one to destroy or modify the action upon the glandular intestinal tissue, and the other to arrest the putrefaction and thus cut off the supply of septic infection. This can not be accomplished by way of the rectum, and it can not be accomplished by way of the circulation, and I am not prepared to say that in the present state of knowledge it always can be satisfactorily done in any way, but I will call attention to the only reasonable plan to adopt, and that is to attempt to prevent putrefaction within the alimentary canal. Antiseptics that are readily absorbed can do but little good. If frequently repeated, they can prevent the fermentative change commencing in the stomach, but to keep the contents of the bowel sweet, an antiseptic must be chosen that is less soluble, or if possible be so combined as to prevent absorption before the ulcerated surface is reached. It is not necessary that the agent designed to prevent fermentation should be as active as one that must destroy bacteria, for there is a wide difference in the power required. It may be easier to prevent fermentation of the intestinal contents, and the albuminous fluid of the ulcers, than it is to kill the fully developed typhoid poison that produced the ulcers, but it is quite probable that if the latter poison should remain undisturbed, and septic fermentation could be controlled, the ulceration would be much less formidable. In the list of those agents that appear to be capable of being carried down the intestinal tract before being entirely absorbed, are emulsions that may contain an antiseptic (for instance, turpentine), salicylic acid, sulphite of magnesium, thymol, iodoform. Constipation so as to cause detention in the upper part of the bowel of the antiseptic should not be allowed. No other theory, it appears to me, can be more reasonable than that I have given of the pathology and treatment of typhoid fever. From all the information I can gain, the nearer this treatment has been approached, the greater the percentage of recoveries.

Diphtheria.—When this disease produces death, it is almost invariably either by extension below the glottis or by septic infection. I shall refer to the treatment of septicæmia for the management of that element of the disease, and shall in the main confine myself to the study of the

local manifestations in the pharynx. Excluding poisoning of the blood by bacteria, and extension of the false membrane beyond the limits of the fauces, diphtheria would not cause much apprehension for the safety of the patient; in fact, under such circumstances it would not equal quinsy in the discomfort produced. To effect such a result should be the object of our treatment. Simply, then, let me say that constitutional treatment for the purpose of combating the local affection, is irrational and useless. Our efforts should be directed to the destruction of the new growth and the prevention of putrefaction. Happily that which accomplishes one, does the other. The choice of antiseptics advisable in this case may be very wide, but there are reasonable objections to some which will be noted. First, let us consider the methods adopted for instituting local treatment. It is not probable that putrefaction can be prevented and its products effectually disarmed by the inhalalation of anything respirable. It is necessary, in order to purify an ulcerated surface, protected by a membrane or exudate, to do more than pass over it a dilute vapor. I can not believe that there is any other safe method of accomplishing this purpose than by saturating the affected parts with a solution capable of destroying bacteria, and that to make sure of effecting the purpose, to repeat the operation every hour. I exclude volatile, suffocating septicides like chlorine, bromine, and sulphurous acid, and rely upon those that are at once effective and comparatively unirritating, and that do not coagulate albumen, and thus produce a protection against thorough disinfection. Iodine admirably fulfills these requisites. The precipitated iodine being slowly changed to hydriotic acid, adheres to the parts and produces a continuous antiseptic action. Besides this, its effects in reducing acute inflammatory action of the fauces is more pronounced than anything else I have ever used. I prefer for making the applications an ordinary swab, because it carries more fluid than a brush, and its greater firmness permits the application to be made more thoroughly. In an event of so great importance, emotional feelings should not stand in the way of thorough treatment, no matter how rebellious the patient. It should be remembered that septic infection may not occur in the absence of treatment; and, therefore, it can not be determined from a few cases whether the treatment should receive the credit for the absence of septicæmia. I am

fully convinced that local antisepsis prevents extension, and that in many cases where croupy symptoms were the first discovered, they were preceded by a diseased pharynx that a child may frequently not complain of, but that an examination would have revealed.

Take of—

Tincture of iodine,	30 minims.
Water,	1 ounce.

Mix and write: Shake the vial and apply every hour.

I should add that when septicæmia has already commenced, the supply of infection should be promptly cut off by local antisepsis. The principles here adduced have been fully sustained in a large experience in the treatment of this disease.

Puerperal Fever.—There is no disease that appears to be more clearly the result of septic infection than this. The symptoms are those of septicæmia, and those symptoms never occur to a patient known to be in an aseptic condition. The facilities for infection can not be excelled whenever a puerperal uterus is the seat of a solution of continuity, for it contains a putrescent mass, unless it is effectively provided against by human agency, and the disease never occurs if putrescence of the uterine contents is prevented. The fostering conditions surrounding the retention of an albuminous fluid in any portion of the human body, having been exposed to fermentative germs, will generally develop a fermentative product in eight hours. Any puerperal woman is in danger of septic infection who may have facilities for bacterian transmigration from the uterus, unless putrescence is prevented; and, inasmuch as it is impracticable to determine the condition of the interior of the uterus, she must rely for prophylaxis upon asepsis. Upon this subject I shall advise that the most convenient and satisfactory prophylactic measure is that frequently adopted in surgery, to prevent the retention of fermentable material by drainage, and this is to be accomplished by frequently assuming an erect position. In practice this has proved a great success, for by it patients are enabled to avoid the putrefactive odors that always attach to putrefaction. However, if it is known that the uterus contains solid elements for fermentation, other measures than drainage must be instituted, which will be described further on.

If by neglect, or in spite of antiseptic precautions, a so-

lution of continuity of uterine tissue has permitted putrefactive products to enter the circulation, we will now have to deal with puerperal septicæmia. Let us distinctly remember that recovery may be possible in all cases of septic blood-poisoning, when only a minimum of septic material has been taken up, providing a further ingress of poison can be prevented. The source of septic infection does not change the constitutional treatment, and as that has heretofore been given, we shall be confined to the very important subject of the arrest of the putrefaction. It is a grave mistake to depend upon the statement of the patient or attendants in regard to the probability of improper retentions within the uterus. They do not always know, but when the symptoms of septicæmia are present, an investigation will never fail to find the origin where I have already indicated. Manifestly, the local treatment should be directed to the removal of the source of the infection, and this can generally be done in either of two ways, but should be done by both. One method is the introduction within the uterus of anti-ferments, and the other is the removal of the fermentable material. In the choice of antiseptics, reference should be had to energy in destroying bacteria; to convenience of application by injection; and to non-coagulating property. Probably to fulfill these indications no medicine excels the hypochlorite of potassium, although others in our list may be satisfactorily substituted for it; at any rate, no time should be lost in the application of whatever may be decided upon. But, above all other remedies that may be used to both destroy bacteria and remove the medium for their development, I recommend hot water. The details of this operation can only be safely entrusted to the medical attendant, who must be provided with a suitable instrument for thoroughly washing out the uterine cavity. Success will depend upon ability to remove the whole of the offending material, or preserving it from further changes, until it can be removed. Inasmuch as the septic poisoning shows to a certainty that the uterus is not in a condition to restrain infection, the operation should be repeated every six hours, until perfect drainage can be established. I will add that clinically, the local treatment I have described shows surprising results, both as to the amount and character of the contents of the uterus, and in the amelioration of the constitutional symptoms. Whoever shall test the treatment here recommended, will be quite

unlikely to doubt the correctness of the indicated pathology upon which it is founded.

Typhoid Pneumonia.—The literature of this disease is meager and unsatisfactory. To the symptoms of pneumonia are added those of septicæmia. In addition to the constitutional treatment of this dangerous complication, I can give no advice founded upon any reported clinical observations to which I have access, but I wish to call attention to the fact that it is probable that a plan could be devised by which a further admission of germs to the lungs could be prevented. To arrest the putrefaction is doubtless impracticable by the inhalation of necessarily dilute anti-ferments, but the putrefaction changes may be considerably limited by degerminating the air to be respired. I have not determined what would be the most practicable method of accomplishing this, hence I shall leave the subject for a future consideration. It is but proper to say that the constitutional treatment of septicæmia is the one above all others for the cardiac asthenia that is generally the cause of death in uncomplicated pneumonia.

Erysipelas.—I can not demonstrate that erysipelatous dermatitis is a fermentative disease, but I am quite positive that it yields to antiseptic treatment more promptly than to any other. Constitutional treatment alone has little influence upon this affection, but the effect of local treatment is quite observable. Carbolic acid in my hands has given more satisfaction than has any other remedy, and I have no doubt that its property of producing local anæsthesia is the basis of a large percentage of its value.

Take of—

Carbolic acid, . .	15 to 25 grains.
Glycerine, . . .	1 fluid ounce.

Mix and write: Apply with a soft brush every two hours.

Suppuration.—It is strange that suppuration can not be produced artificially without facilities for germ infection, and that if the opportunity is otherwise present, it may be prevented by germ destruction. Understanding this, it is more strange that suppuration may occur without a known source of germ implantation, and that multiple abscess may result from the absorption of unfermented pus. Poisoning from putrescent pus is simply septicæmia and need not be further mentioned. From what is known of suppuration it would appear that its etiology is intimately connected with

the production of a new formation by germination. It is not difficult to prevent suppuration by the local use of anti-ferments, but when the locality is such that local action is impracticable, the inquiry is at once made, Can suppuration be influenced by constitutional treatment? There can be no doubt that this question may be properly answered in the affirmative, and that beyond all comparison, sulphur is the remedy. This anti-ferment uncombined is insoluble, and to obtain its constitutional effects it must first become soluble. I need not now go through with the chemistry appertaining to the administration and absorption of sulphur, but whatever may be its chemical state in the circulation, it has become a settled conviction by the profession that it is best administered in combination with an alkali or an alkaline earth. The preparation now in vogue is the sulphide of calcium. It is not probable that this salt has in this affection any therapeutical value referable to its base, but as far as I am able to discover, it is chosen as an eligible method of exhibiting sulphur in an active form, with a minimum of undesirable effects upon the stomach. Late literature would seem to show that this therapeutical agent is a valuable acquisition to the list of anti-ferments.

Dyspepsia is aggravated or wholly produced by fermentation of the ingesta. Failure of digestion without a resulting fermentation, if possible, would produce no such irritating effect upon the stomach, as is the case when the food is turned into a fermenting mass; and it has been abundantly shown that the artificial prevention of such a change in the contents of the stomach will often permit that organ to regain its normal condition. One of the strong tenets in aseptic therapeutics is the removal of fermentative material when practicable, and its accomplishment in the few cases where it has been practiced, by the aid of the stomach-pump, in chronic, gastric catarrh, has given very encouraging results. In private practice this procedure, as a rule, is entirely out of the question, and so far as antiseptic therapeutics go, we are confined to the various drugs having these characteristics. For reasons that I am not fully able to explain, their effects vary in different cases in so marked a manner that we shall be unable to foretell what remedy will be best suited to each individual case. Some of the most valued antiseptics produce constitutional effects which may render them entirely inadmissible. The rapid removal of an antiseptic in solution

from the stomach by absorption renders its action temporary, and the fermentation proceeds. When the debris of a former digestion, or rather indigestion, is mingled with fresh food, a condition is brought about that may go on indefinitely if not interrupted by properly directed measures. I think it safe to say that in this disease, any effort made to cure it, directed to the afflicted organ, and ignoring especial attention to its contents, will surely result in failure; therefore it becomes of great importance to study the antiseptic method of treating indigestion. In this affection it is the etiology and not the pathology that claims the most of our attention. I should say that our choice of antiseptics will prove most satisfactory if chosen from this list. Hypochlorite of potassium, borate of potassium, chlorine water, salicylic acid, sulphite of magnesium, glycerine, iodoform, thymol. The most difficult food to preserve in the stomach is starch in any form—the easiest is beef and mutton. Nothing can be of more importance in the management of an obstinate case than a practical observance of this very true statement. It seems quite certain to me that the alarming increase of dyspepsia in this country bears a direct ratio to the consumption of canned fruit, and this view is strengthened by a consideration of these relations in individual cases. As a prophylactic measure, this suggestion should have an important place. A fair test of the antiseptic treatment involves a repetition of the dose from one to three times after each meal. I presume that many instances of failure may be attributed to neglect of this precaution. The stomach with its provisions for exosmosis of fluids, differs materially from a tight vessel in which experiments may have been made, and an equal correspondence in results may be expected. An important ally in the preservation of the contents of the stomach from fermentation consists in, at least, a partial attempt to secure the results obtained by washing out the viscus; and this may be accomplished by allowing no evening meal. So far as inconvenience is concerned, I have found that this long rest of the stomach soon becomes a habit not at all to be regretted by the patient, on account of the pronounced benefit that is promptly experienced.

Infantile Diarrhea almost invariably depends upon fermentation. I desire to invite attention to this view of the pathology, and urge that the treatment be based upon this view of the affection. Borate of potassium as a preserva-

tive and an antacid is particularly efficacious in these cases, and total abstinence from food is a valuable addition to the anti-fermentative plan.

Intermittent Fever will receive but little attention, not because little interest centers in it as a zymotic disease, and its great antidote, the cinchona alkaloids, for there is no disease that has occasioned greater wonderment, and no antidote that has been a greater subject of admiration; but because almost everything connected with the affection is old, and there is nothing of importance that is new to say. The periodical discovery of the organism that causes malarious affections has occurred, it is announced, and we await further developments. I can say from a personal knowledge that is sustained by the testimony of my neighbors in the profession, that cinchonidia has exactly the same standing as quinia as an anti-periodic. I will also add that in cases where the disease obstinately returns, the alkaloid dissolved in hydrobromic acid may be administered for a long time as a prophylactic without evil results, and with success.

Gonorrhea is undoubtedly a fermentative disease. A treatment directed exclusively to overcoming the pathological conditions of the inflamed mucous membrane will not prove nearly as successful as one that has reference to the fermentative process, that by its irritative properties continues the phenomena of inflammation. I shall close this subject by advancing a plan of treatment that has a very strong support from a clinical standpoint.

Take of—

Iodoform, pulverized,	2 drachms.
Subnitrate of bismuth,	2 drachms.
Chloral hydrate,	15 grains.
Morphine,	5 grains.
Oil of rose geranium,	20 drops.
Cocoa butter,	1 ounce.

Mix and make twenty-four suppositories ⅛ inch in diameter. Write: One suppository to be pushed into the urethra three times daily.

Skin Diseases, from a scientific point of view, are among the great studies. A brief reference to some of their peculiarities will suffice to connect them with our topic. It appears that nearly all of the skin affections are described as dermatitis, with the understanding, however, that a lim-

ited number are conditions of hyperæmia, but lacking inflammatory characteristics. It is a striking and interesting subject for inquiry that inflammations of the integument should be accompanied by so great and constant a variety of phenomena, and there seem to be no obstacles to the connection of these conditions with their etiology. No other rational hypothesis is likely to be substituted for this in the present state of our knowledge. Although the origin and perpetuity of these diseases can not generally be demonstrated to depend upon adventitious living organisms, yet such a theory must supplant any proposition founded upon the morphology of the diseased tissue under discussion. Although it must be admitted that antiseptic agents may possess other remedial properties than those of destroying parasitical growths, it is also true that the most successful treatment of the greater part of skin diseases is the aseptic one. The action of the preparations of mercury, zinc, and lead, when used locally in some of the diseases of the skin, is quite probably dependent upon the formation of albuminates of these metals within the diseased structure, and perhaps their resolution in the alkaline fluids that may be present, producing thereby a radical morphological change in the inflamed part, generally denominated alterative. This plan of treatment has no reference to the hypothetical etiology I have proposed, and in my hands it has often failed where anti-fermentative treatment has succeeded. I do not propose to go into the details of the treatment of each of the immense variety of skin diseases, but rather simply make the effort to awaken an interest in this branch of study. Having had especial opportunities of testing the merits of the formulas I shall give in prurigo and eczema, I shall leave the subject by saying that I do not believe they can be profitably replaced by anything else to be found in the literature of the subject, and that in many other of the skin affections there are reasons for expecting as satisfactory results.

Take of—

Washed sulphur, . . .	30 grains.
Carbonate of ammonium, . .	30 grains.
Petroleum ointment, . .	1 ounce.
Perfume, sufficient quantity.	

Mix and write: Apply at night and wash with soap in the morning. (For prurigo).

Take of—

Iodoform, pulverized,	30 grains.
Subnitrate of bismuth,	60 grains.
Chloral hydrate,	15 grains.
Glycerine,	1 drachm.
Oil of rose geranium,	15 drops.
Water,	3 fluid oz.

Mix and write: Shake and apply one to three times daily. (For eczema).

This formula in varying proportions of the water, or its substitution by an ounce of tincture of opium, constitutes a favorite local panacea for the many affections of the skin and mucus membranes.

The human body is the subject of many other pathological processes that are wholly or partially fermentative in character, that to describe would unduly increase the volume of this essay. It has been my intention to take up the study of those diseases that are sufficiently representative, to give fair illustrations of the relations existing between an etiology that may be more frequently the source of our afflictions than is generally supposed, and a treatment that up to the present time must be regarded as purely rational. I think I have so explained the principles here inculcated, that their application need not be confined to the abnormal fermentative effects chosen for our study, but rather that we may the better conduct the management of all diseases that can reasonably be classed as the results of fermentation.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

TAMPONNING THE UTERUS.—BY DR. AUVARD, ACCOUCHEUR TO THE HOSPITALS (PARIS).

A primipara, thirty-two years of age, at full term, entered the hospital at 1 A. M. The pains of parturition had begun at nine in the evening.

Delivery occurred spontaneously, a short time after admission, at 2:25 A. M. Head presentation.

The expulsion occurred whilst the patient was standing up. At a moment when she was not under observation,

the woman, thinking that she felt a desire to evacuate her bowels, got up to go to the water-closet; putting her feet to the floor, she had a violent expulsive pain, and the child was suddenly expelled, dropping to the floor; the cord was broken about the center. However, neither mother nor child suffered any from the accident. The placenta was delivered, without hemorrhage, twenty minutes after the expulsion of the child.

The condition of the woman was perfectly normal up to the fifth day.

On the evening of the fifth day the woman, feeling herself very well, thought that she could get up for a few moments in order to rearrange her bed. The nurse made her lie down immediately.

During the following day she had a slight bloody discharge from the genitals. In the morning at five, the hemorrhage becoming considerable, the midwife on duty was informed and gave her a hot intra-uterine injection at 48° C. (118.4° F.) of about two litres of the liquor of Van Swieten diluted. During the injection the woman felt great malaise, without, however, going into a complete syncope.

In consequence of this injection, which brought away numerous clots, there was considerable amelioration, both general and local, in the condition of the patient.

About seven o'clock the bloody flow again reappeared, but slight; at nine o'clock it was more abundant; at 9:30 A. M. I reached the bedside of the patient.

I found her pale, covered with perspiration, the pulse feeble and frequent, the respiration somewhat embarrassed. Palpating the abdomen in searching for the uterus, I could not feel it, but provoked the expulsion of blood clots through the vulvar orifice. The condition of the patient was rather alarming, and without seeking for the cause of the hemorrhage (which could not be other than secondary uterine inertia, the ovum having been completely expelled), I had her placed across the bed in the obstetrical position.

After a rapid washing out of the vulva and a vaginal injection at 120° F. with a solution of bichloride of mercury, I seized the neck of the uterus with two double-tenaculum forceps, fixed in the anterior and posterior lips, and drew it down into the neighborhood of the vulvar orifice.

During this time the woman fell into a syncope and remained thus for a quarter of an hour; three subcutaneous

injections of ether were made at short intervals, and I continued my intervention.

The neck having been brought down to the vulva, I gave a warm intra-uterine injection by means of the sound of Doleris. I then introduced my finger into this cavity in order to discover the condition of the parts; I found it filled with clots, which the finger displaced, but could not remove.

The cervical canal seeming too much contracted to introduce two fingers, and much more so for the introduction of the hand, I attempted to empty the cavity of the clots by the aid of a fenestrated curette, permitting of simultaneous irrigation (which M. Mathieu had made for me, according to indications I furnished him); but this maneuver is slow, and it is necessary to be quick.

Withdrawing the curette, I abandoned it, and having firmly fixed the double-tenaculum forceps, which held the cervix, and with the other hand holding the fundus of the uterus, I introduced with some difficulty two fingers into the cervical cavity, and just into the cavity of the body, and was enabled thus to remove the clots and to empty the uterus. The muscle of the uterus hardened and the flow is almost nil. The syncopal state still persists.

Immediately after this evacuation I took a band of iodoform gauze, ten to twelve centimeters wide, and five meters long; hooding my index finger with the end of it, I carried it directly into the uterine cavity. I withdrew the index finger, and by the same maneuver carried in a further portion of the band. By a repetition of this process the uterine cavity is soon filled; the uterine muscle is hard and well contracted; there remains without a little less than a meter of the iodoform gauze; the uterus is now released, and with the finger I introduced the rest of the band into the vagina, so that not more than about ten centimeters of it protrudes through the vulvar orifice.

At this moment the woman begins to recover consciousness.

A compress of cotton-wool is placed over the fundus uterus, which is plainly felt, and another pledget of aseptic cotton is placed over the vagina, and a bandage wound around the abdomen and the upper part of the thighs, so as to exercise moderate compression.

The patient is replaced in her bed, with her head low. She is warmed up, and a tonic regimen (alcohol, wine, etc.) given her.

The day passes excellently well, the patient eats with appetite, there is no local inconvenience, in the evening spontaneous and easy micturition.

Nursing is suspended for thirty-six hours, so as to avoid all movement. In the morning before the intervention the temperature was 98½° F., it was the same at six in the evening

The night was likewise good; the patient being placed in an isolated apartment, slept well the whole night.

The next morning at 10 A. M. I again saw the patient. The temperature was normal, and she had urinated spontaneously. General condition excellent. I proceeded to remove the tampon. For this purpose it sufficed to take hold of that part of the iodoform band protruding from the vulva, and to gradually draw it out. The whole band is withdrawn without difficulty and without causing the least pain. The band is somewhat tinged with deep red blood, there is no trace of a recent flow, and not the least odor about it, except that of the iodoform. Measuring it again, and this time carefully, its length was found to be 4 m. 60.

The day was good; nursing is resumed in the evening in order to relieve the engorged breasts. No vaginal injections are made, so that the uterus should not be touched. We content ourselves with a toilet of the vulva. The bandage around the abdomen is left till the following morning. Not a drop of blood flows from the genitals. The lochial discharge is likewise nil.

The next day the general condition is excellent and the woman begins to gain in color. Morning and evening temperatures normal. Slight lochial flow, without any odor. No other except sublimated dressing to the vulva.

From the 15th to the 22d the general condition is good. Slight muco-purulent discharge. The temperature oscillates between 98½ and 100° F. On the evening of the 18th it rose to 101°, and the 19th to 101¾°. No appreciable cause on the part of the genital organs could be discovered, for the lochia were but small in quantity and without any bad odor; perhaps we must incriminate a rather obstinate constipation which was difficult to overcome.

On the 22d the patient progressing well and not having lost a drop of blood since the tamponning was allowed to get up. Not a trace of hemorrhage followed.

October 25th I made a vaginal examination and found the uterus in its normal position. The volume is physiolog-

ically that of the epoch following delivery. The touch is in no way painful, and not a drop of blood is brought away with it. Attempting to push down the uterus with the hand placed on the abdomen, I could not make it descend more than two to three centimeters. The large ligaments seemed to have resumed their normal tonicity.

The 27th the patient left the hospital perfectly well, with her child, which she continues to nurse.

Thus, as is seen from the history here related, the result was most excellent. I was struck by the powerful hemostatic properties of this method of tamponning, and the facility with which the gauze is introduced and removed. During the whole time that it remained within the uterus, the woman did not experience the least pain, and none of the inconveniences that usually accompany tamponning of the vagina (retention of urine, pains produced by the compression of the soft parts).

I have not as yet had a case of septicæmia in which to try this procedure, but I should not hesitate to do so when the indications present.

Tamponning of the uterus is still too new for a complete description of it to be traced. It is possible that it may be more discussed from now on. For the present it suffices to give the two principal indications for its application:

1st. Grave uterine hemorrhage, when the ovum has been completely expelled from the uterus.

2d. Septicæmia of intra-uterine origin, the cavity being previously curetted and thoroughly cleansed.

As to the mode of procedure, this is according to my idea how it should be done: After having thoroughly cleansed antiseptically the vulva and the vagina, the cervix is seized with two double-tenaculum forceps (in cases of hemorrhages immediately after delivery, it is not necessary to pull down the uterus, for the hand can be directly introduced into the cavity). Remove from the interior of the uterus all clots if the case be one of hemorrhage, or of retained debris if it be one of septicæmia. Take a band of iodoform gauze (15 to 100), five meters fifteen centimeters wide and sufficiently thick, and introduce it into the uterus with the finger or with the hand, according to the case. The introduction should be gradual and made by introducing the finger or hand, withdrawing and again introducing. When the cavity of the uterus is filled, detach the vulsella and introduce the rest of the band into the vagina, just leaving the end protrude

through the vulva. Compress the abdomen by means of a bandage. Leave the tampon in place twenty-four hours, and then remove it by simple traction on the extremity protruding through the vulva.—*Journal de Medicale de Paris*, December 11, 1887.

Selections.

Eclampsia.

BY FREDERICK W. ROBBINS, A.M., M.D.

MR. PRESIDENT: Fellows of the Association.—By the term eclampsia we refer to those cases of convulsions occurring during pregnancy or labor, or soon after delivery; barring all cases due to hysteria, epilepsy, or any irritation which might result in spasm in any other than the puerperal state.

With these words of explanation in mind, I will, with your indulgence, report briefly three cases from my own practice, and add a few remarks upon this, a subject which we have not had under consideration for several years. The first case that will be reported was that of my first midwifery experience, and when two weeks later I was called to my second case and found a similar condition of things, the great desire for confinment cases gave way to a feeling of dread at their announcement.

The third case is of recent date, and in its conduct I was advised and aided by Drs. McGraw and Carrier.

Case 1.—Mrs. Blank, a plethoric German woman about twenty-four years of age; never had borne children. Found her about two o'clock in the afternoon in labor, two miles from Pinconning, Michigan, under the care of a midwife. Already she had suffered severe seizures and was unconscious on my arrival. Soon she rolled up her eyes, forced her head back into the pillows, was rigid for an instant in a tonic spasm, which was soon followed by those awful clonic muscular movements, accompanied by frothing at the mouth and horrid blue-black face, all of which symptoms are fully impressed on your mind unless perchance some of you have been so fortunate as never to have met with a case of this character. Being an undergraduate at this time, and fully realizing that the next few hours were to be anything but enjoyable

ones, I telegraphed for Dr. Peter Stuart, of Standish, with whom I was associated. At once the patient was given a good-sized dose of potassium bromide, and then upon examination I found the first stage of labor completed. During the next two hours the patient had several seizures, but the head of the child did not advance; at length, about half-past four o'clock, Dr. Stewart arrived with his forceps, and the woman was immediately delivered of a fine, healthy boy, who was well and hearty for the three months that I knew of him.

We had hoped that the spasm would cease after delivery, but were doomed to disappointment. From the arm we took several ounces of blood, and continued the sedative medication together with the inhalations of chloroform during the spasms. She never recovered consciousness and died quietly during the night. This woman's feet were not swollen, nor from the ignorant people could we get any history pointing to kidney complication.

Case 2.—Miss H., aged sixteen; mother dead; one of several children living at home. Her father had called, telling me of her wildness, and that she would soon need attention. Sooner than was anticipated, however, I was summoned by a messenger, who reported the girl in fits. There was no time to be lost, and in a few moments I was witnessing a scene similar to that previously described. Immediately chloroform was administered during the spasm, and chloral in quite large doses internally. The exact size of the doses of chloral I do not know, for, country fashion, the drug was given by guess. Again Dr. Stuart came up, and after a time went home, after sanctioning the plan of treatment. The spasms recurred at irregular intervals during the night and Monday. The chloral was pushed with a good deal of vigor. There was no dilatation of the os uteri, and we did not attempt to hasten labor. On Monday afternoon, after the fourteenth convulsion, the patient became more easy, and, although the convulsions did not return, she lay in a semi-conscious condition, partly due to the chloral, until, on Tuesday morning, labor came on, and about four o'clock in the afternoon she was delivered of a child that had been dead for some time. During labor there was no tendency to spasm, and after delivery the mother gradually recovered consciousness. The albumen with which the urine was loaded gradually disappeared and perfect health established within a few weeks.

Case 3.—Mrs. R., Detroit, aged twenty-four, primipara. Patient had been perfectly well all through her pregnancy up to the latter part of the eighth month, when her legs began to show œdema. A few days previous to the catastrophe I had examined the urine for Dr. Boice, who had been engaged to attend the case, and found a moderate amount of albumen, but detected no casts. We were uneasy concerning her, and the doctor was administering diuretics, but without much effect, as we shall see. At 2:30 in the morning message came that Mrs. R. was having a fit, and at Dr. Boice's request, I took charge of the case. Expecting trouble, I responded to the call, to find Dr. Carrier on the ground, and the patient in a semi-conscious state, after her second convulsion. Not only were her feet swollen, but the arms, neck and cellular tissue of the trunk were infiltrated and boggy to the touch. Within two hours one-fifth grain pilocarpine was given hypodermically, but without producing salivation or sweating. Potass. bromide gr. xxx. chloral gr. xx. were given every hour or two, but the convulsions came on about once an hour. About four o'clock A. M. it was decided to hasten delivery, which I did, dilating the cervix first with my fingers, and then introducing Barnes' dilators. The process was slow, but by eleven o'clock the cervix was sufficiently open to allow the application of forceps. After considerable difficulty, owing to lack of proper flexion of the head, we were able to deliver her of a dead child. The husband told me afterward that the child's movements had not been felt for several days. After delivery the patient was placed comfortably in bed, when another convulsion came on, followed in a short time by a second, during which suddenly the heart stopped and our patient was dead.

Cases of eclampsia are rare, but occasionally the general practitioner will meet with one, and then it is that he needs to have in mind the possibilities of ætiology and the best plans of treatment. It is in just such rare cases that the emergency finds us frequently lacking that clear understanding necessary to the best welfare of our patient. The relative frequency of eclampsia has been stated by authors of large experience; some placing the relation as low as one to five hundred, others as high as one to three hundred and twenty-five.

Occasionally we hear of epidemic eclampsia, and although I do not believe in any such ætiology of the trouble, yet this

peculiar coincident coming together of rare cases was well marked in Pinconning, a little town of six hundred, where my two cases were preceded by a case a month previous, of undoubted eclampsia, in the hands of one of Michigan's quacks. This patient died with the child yet unborn.

It is not my idea to go at length into the ætiology of this disease, so I will dismiss with a few words the older theories, each one of which has been heartily supported by first-class men. For a complete and interesting résumé of this part of the subject you may refer to the "Pathology of Pregnancy" by Charpentier.

By numerous experiments it has been found that convulsions can have their origin only in spinal cord, medulla, or tubercula quadrigemina and the theory given by Marshal De Calvi, in 1851, that eclampsia is due to an alteration of the nerve centers and their envelopes is broken down by numerous examinations, where no pathological condition of these nerve centers could be demonstrated. Another theory adopted by many French accouchers was that the cause of eclampsia was to be found in cerebro-spinal hyperæmia, but they hardly seem to consider that the severe convulsive muscular action would in nearly every case tend to produce just such congestions as those found.

Others have claimed that convulsions were due to reflex irritation of the cord from peripheral stimulation. In considering this as a cause, we must, with our later ideas, deny that of itself it can be any more than an exciting or secondary cause. There must be some reason for so disastrous a result of peripheral irritation which usually is followed by no unpleasant symptoms; either the neurotic tendency must be very highly developed or some condition of the blood exist rendering the spinal nerves especially sensitive. This last hint foreshadows the report of the underlying condition that to-day is acknowledged as having to do with eclampsia, namely, albuminuria.

In nearly all cases of eclampsia albuminuria is present, and because absent in a few cases, some are ready to assert that albuminuria is a consequent rather than an antecedent of convulsions; but, as has been well said, albumen is not always found, even in decided cases of Bright's disease. To-day I examined the urine from a patient who has had Bright's disease for years without being able to find any albumen, but the microscope revealed epithelial casts and a few pus cells. Seyfert, of Prague, often finds little or no

albumen in even fatal cases of eclampsia, and sometimes no kidney lesions. Whether his examination of the kidney was made microscopically or macroscopically I do not know, but am inclined to think that such statements are often made without recourse to the pathological histology; and that disease of the tubules will be evident when well prepared sections are placed under the microscope, even when the general appearance of the kidney has not been changed. Brown noticed in several fatal cases with no albumen amyloid degeneration of kidneys and heart, and in others atrophy of kidneys where albumen and casts had disappeared.

There are cases where albumen is present in well recognized amounts, and there be no other symptoms of Bright's disease. In some of these cases I doubt not the filtration of albumen is due to passive congestion of the kidneys due to pressure upon the renal or other large abdominal vessels.

Just here I will refer to a fine article which recently appeared in the *Journal of Obstetrics*, by Prof. A. F. A. King, of the Columbian University, in which, accepting the fact of uræmia being the cause of eclampsia, he attempts to show, and with a good degree of success, too, that the cause of the renal trouble can be traced to pressure upon the large vessels by the head of the child. That in transverse position, or when the head rests on the ilium, there never is any danger of convulsion, and that when by change of position we remove this pressure, often the œdema of the limbs can be seen to gradually disappear.

In some of these cases of albuminuria we have at the same time secretion of a normal or nearly normal amount of urine, and in such cases I should not so much fear the event of convulsions. We know that after operations of nephrectomy the remaining kidney performs the work of two. So in like manner suppose that we find albumen and numerous casts in the urine showing that the secreting epithelium is being removed from the tubules. Now, if we find the amount of water passed to be normal, we are justified in hoping that the disease is confined to one kidney, that the products of the urine will escape by means of the well organ and our patient not have convulsions. Sohlein examined the records of thirty-two eclamptic autopsies and found dilatation of the uterus in eight. Will not pressure on the ureters alone sometimes account for the uranæmic symptoms?

Lusk puts the whole matter well when he draws attention to the fact that it is renal insufficiency and not albuminuria that causes uræmia and convulsions.

Since we can almost never trace the cause of eclampsia to peripheral irritation without albuminuria, and that in about twenty per cent. of albuminuric pregnant women we have eclampsia, it seems to me that we are justified in calling the condition of albuminuria the predisposing cause of convulsions, and that is all.

Tyler Smith says: It is not often that the first attack comes on when the neck is distended, or as the head clears it, but when the vulva and perineum are pressed upon, and it is in these cases that speedy delivery accomplishes a cure by relieving pressure upon the soft parts. In cases of this kind one can not for an instant fail to attribute to the peripheral irritation the exciting cause of the attack, and to its removal the patient's cure.

There have been cases where distension of the bladder or fæcal accumulation have seemed to be the exciting cause. If we accept the theory that albuminuria is the great predisposing cause, the question arises, how does it then act? Is it by depriving the blood of its normal amount of serum, thus rendering the nerve centres more sensitive to peripheral irritation? Probably not, but to the suppression of urine accompanying albuminuria and the accumulation of the poisonous waste products in the blood. Now, what are the poisonous waste products? Until lately urea was given the credit of being the poison and the poisonous condition called uræmia.

Lusk says that uræmia is caused by the accumulation of urea and other ingredients of urine. Some have thought that the trouble was due to carbonate of ammonia into which the urea is changed. Others think the trouble due to kreatin, kreatinin, leucin, etc. Chief among these believers is Bournville, who, under Charcot, made a number of temperature observations, and concludes that as the temperature rises in cases of eclampsia from the beginning of the attack, urea is not the poison, for he says that in uræmia the temperature is invariably depressed. Nearly all authors on uræmia speak of the high temperature except in old people. For myself I can not draw a distinction between uræmia and eclampsia, and am willing to call the underlying condition uranæmia or uræmia with Lusk's definition of the term.

Shall we always examine the urine of our patients during the latter months of gestation? Yes, if we can do so without worrying our patients, but should any œdema of the limbs or puffiness under the eyes be detected, it should not prevent our making an immediate examination of the urine, for it is now before the monster causes trouble that we must attempt to throttle him. The treatment of albuminuria is simple. Keep in mind the theory of Dr. King, and attempt by position or manipulation to raise the head so that it will rest on the iliac fossa. Place the patient on an exclusive milk diet, keep the bowels in a good condition by salines, and the skin by wearing woolen clothing.

It is most natural to prescribe diuretics, but this is not rational treatment, especially if kept up for any length of time, for the effect of such medication is to increase the congestion of the kidneys rather than to allay it.

After the disappearance of albumen, the administration of iron and the bitter tonics would be rational treatment. As to the question which here arises concerning the propriety of inducing premature labor, there is a great difference of opinion. Nearly all of the foreign writers, including Charpentier and Tarnier, are against the procedure, while Lusk says: "When the symptoms of nervous irritation become prominent and eclampsia seems imminent, then the time for us to sit with folded hands has passed."

Dr. McLean, of the College of Physicians and Surgeons of New York, advises premature labor if the albuminuria is a prominent symptom in the eighth month.

It seems to me, however, that in most cases it will not be advisable to bring on labor. If convulsions have occurred from time to time during pregnancy, if the patient has barely escaped death from eclampsia in a previous labor, if the child be dead or the patient is very nervous and œdematous and does not improve, but grows worse under treatment, in these cases it may be advisable to bring on premature labor.

Bearing in mind that only about one albuminous patient in five has convulsions, and of these eclamptic patients two-thirds get well, that the chances for life are much less for a premature child than for one at term, that the very effort to induce labor is likely to bring on the convulsions dreaded, inclines me to take sides with the foreign accoucheurs against the induction of premature labor. When we are actually confronted with the convulsion, to interfere in this

way is probably to be overzealous. In the last case reported I noticed that during the hours in which the Barnes dilators were in place, there was a continuous muscular twitching, even when the patient was comparatively quiet. While in this case, œdematous as she was, there seemed to be no chance of satisfactory termination, yet it is certain that the delivery did no good, and in another such case with rigid os uteri and no uterine contractions I should not be inclined to resort to rapid delivery. On the other hand, I should keep the patient as quiet as possible, allowing no external irritant of mind or body, and attempt to allay irritation of the periphery and cord by internal medication. Only two medicines are of value at this juncture, namely, morphine and chloral. Of the former we should administer from half a grain to a grain hypodermically, and repeat when necessary, being governed by the respiration, allowing them to come down to eight or ten to the minute, if the convulsions do not cease. In looking over statistics on the result of treatment, we find that the death rate runs from twenty-five per cent. to fifty per cent., while Frazer has collected forty-nine cases treated by chloral alone where the mortality was only four per cent.—certainly a most successful result, which must command our attention, even though we allow for the lying of figures.

Chloral has been given hypodermically with an abscess as a frequent result. By the stomach it is often rejected, and at other times the patient is unable to swallow; therefore we adopt the approved method of Charpentier; make a solution of three drachms in water and give one-third of this as an enema; this to be repeated in from two to four hours if thought best. Charpentier has often given from one hundred and fifty to over two hundred grains with no unpleasant effect.

Now a word as to blood-letting: When the patient is plethoric we should at once have recourse to bleeding, and thus relieve arterial tension and the tendency to œdema of the cord and membranes, but we should have a very distinct idea in mind as to the amount to be withdrawn, and not, as in my first case, be content with a few ounces, which was just as good as nothing at all. In that case, had she been seen early, and from sixteen to twenty ounces of blood taken from the arm or leg, and this been followed by large doses of chloral, I believe she would have been living to-day. In cases of this kind the great danger lies in not being bold

enough with our treatment. Of other methods of treatment I will not speak, as they are of little value. To recapitulate in a few words; eclampsia is due to a poisonous condition of the blood from retained urinary products, often requiring peripheral irritation to inaugurate the attack. In treatment prophylaxis has the first place. Its measures are milk diet, woolen clothing, bleeding if there is marked arterial tension, and of doubtful benefit, induction of premature labor. During the attacks refrain from hastening labor except possibly by puncturing membrane, which at the same time relieves the abdominal tension. Bleed, if patient is plethoric, and administer chloral or morphine in large doses. Use forceps after first stage of labor is complete, and administer chloroform during the seizures. Thanking you for your kind attention, all that I now hope for is a free discussion.—*American Lancet.*

Philadelphia County Medical Society.

Dr. Lawrence F. Flick read a paper on

THE HYGIENE OF PHTHISIS.

Dr. T. J. Mays said: I have listened with much interest to this remarkable paper, which expresses a view which I did not think existed to any extent in this city. The author attributes the existence of pulmonary phthisis to the bacillus tuberculosis. I do not think that such a view is borne out by the facts. If it were true that phthisis is propagated by contagion, those who are the most exposed to the disease should be those who would be most liable to contract it. The facts prove that this is not the case. Probably the best evidence of this is found in the history of Brompton Hospital, of London, when the report was made a few years ago. This hospital had been in existence thirty-six years. It has a capacity of nearly four hundred beds. The history includes nearly all those who were connected with the hospital as physicians, nurses, etc., during this period. Not one case of the disease could be traced to the hospital as the source of contagion. Dr. Brehmer gives some remarkable results in his book on the "Etiology of Pulmonary Tuberculosis." He states that in the town of Görbersdorf, where his hospital is located, the mortality rate of the native inhabitants from phthisis twenty years ago, at which

time the hospital was established, was fifty per cent. greater than at present, notwithstanding that during that time there have been present about twelve thousand consumptive patients who have freely mingled with the citizens. It also often happens that at health resorts for consumptives, the physician himself is the subject of the disease, and yet, under such circumstances, frequently improves in spite of the presence of the tubercle bacilli.

The author advocates a strict quarantine against the bacilli. Precisely such a quarantine was carried out in Naples for sixty years, up to forty years ago, but the results were entirely negative.

In another statement the author is, I think, not borne out out by facts. He states that females are more liable to the disease than are males. I have recently gone over an enormous amount of statistics, collected in this country and abroad, and they show that females are much less liable to the disease than males. The report of my statistics will be found in the *Medical News* of January 7, 1888. The fact that the disease is less frequent among females may be accounted for by the fact that they have a more extended apical motion than the male, and we know that consumption never occurs in any one who has a well-developed apical expansion. On the whole, one can not help but be pleased with the paper; but while I admire it, I can not agree with all the statements that it contains.

Dr. J. Daland said: I think it has been well ascertained that an hereditary predisposition does play an important influence in the causation of phthisis. It seems to me that this fact still remains well established. With reference to the climatic treatment of phthisis, I do not think that this can be dismissed with the few words which the author has given to it. There seems to me to be no doubt that in the early stage of the disease, particularly in young men, a change to a colder climate is of benefit. The disinfection of the sputa is a point on which sufficient importance is not usually placed. It is a matter of the greatest moment, and should be employed in every case of phthisis.

Dr. S. Solis-Cohen said: I believe that it was Mr. Spencer who thanked a certain philosopher for benefiting him by expressing opposite opinions in a forcible and eloquent manner. I can make my acknowledgments to the reader of the paper in similar language. I admire the suggestiveness and the vigor of his paper, but I find it almost impossible to

agree with any of the theories advanced. As to the practice advocated, physicians of experience are all of nearly one mind; nor has Dr. Flick permitted himself to be led astray in this matter by his theories. The question of the omnipotence of the bacillus tuberculosis is one that deserves to be ventilated on every occasion. I have already to-night quoted the remarks of Dr. B. W. Richardson in another connection; but as I consider him the master-mind in medicine of the nineteenth century, I need offer no apology for again quoting him. He says, "What have we done, to be visited in the heavens above, in the earth beneath, and in the waters under the earth, with the *pestis bacillorum*, which is now regnant?" Everything is bacillus. Dr. Richardson believes that it will not be long before the bacillus of pregnancy will be discovered.

I think that Dr. Flick has himself given the strongest argument against the bacillophobic views he advances. The chain of events graphically described from several starting-points invariably concluding—malnutrition and consumption. Malnutrition is the fundamental, the bacillus is the accidental. It may be that the bacillus does, when inoculated, under certain circumstances, cause tuberculosis; there is some doubtful evidence bearing on this point which can not be dismissed in a discussion of this kind. Even admitting that inoculating with the bacillus will cause consumption, there is no evidence that the inhalation of the bacillus will cause the disease. The inhalation of sputa and the inhalation of the bacillus are two different matters. The pus-cell and the coccus pyogenes are not at all synonymous. They may be in the mixture which goes to make up the sputum, an element similar to those bodies which we know as the leucomaines and ptomaines, which, in a person predisposed and in a low condition, may be capable of exciting the disease by interference with nutrition or otherwise. The evidence on all these points is very far from being clear. But granting for argument's sake, that the microbe is one of the existing causes, we must still recognize, as the reader of the paper has pointed out, that the bacillus is everywhere present, and no matter how powerful are the means brought against it, they are incapable of destroying it or dislodging it, when it is once in the lungs. Even if we could destroy every bacillus in the lungs, at the very next breath the enemy is once more within the stronghold. Therefore, the only rational thing to do to prevent consumption, whether

the bacillus be a cause of the disease or not, is to build up the nutrition of the individual by the measures mentioned to-night and by others. We must utterly discard the misleading, and therefore destructive, idea that by bringing germicidal agents against the bacillus tuberculosis we can benefit our patients in the least. Treat the patient and the bacillus will take care of itself.

The question of marriage of those that inherit the tuberculosis diathesis—and that there is such a diathesis universal experience goes to prove—is a very important matter, and, notwithstanding the views advanced, I think that every one of us should warn against the marriage of those whom we have reason to suppose would transmit such a woful inheritance. The question of baths in consumption is an important one. There are two methods of failure of function in consumptive patients which we must recognize. The one is a failure of assimilation, and the other, no less important, is a failure of excretion. The skin is an important excretory organ, and it can not be kept in the best functional condition without bathing. While we may not plunge a patient into a cold bath, we must see that he keeps the skin of the entire body clean, and as active as circumstances permit. Baths at a moderate temperature, when possible, or if not, daily sponging of the entire body, should be insisted upon. This will often relieve pathological sweating. It is also a question of the greatest importance in how far we shall check sweating by drugs; whether to reduce the skin to a dry and hot condition is not far more dangerous than the very moderate perspiration for which atropia and other drugs are frequently given. The question must, of course, be decided in every case upon its own merits, with due attention to all the circumstances. Still, I feel that it is often better to depend upon our general measures for the relief of this and other special symptoms, than to resort at once to symptomatic medication.

Dr. M. Price said: I would ask Dr. Flick with reference to his experience with inflammatory conditions as a cause of phthisis. I do not believe in hereditary consumption. I believe that ninety per cent. of the cases of consumption come from some inflammatory condition as the starting-point. I am a firm and positive believer in the inflammatory origin of consumption. In nineteen years of practice I have not seen more than three or four cases in which I could not discover an inflammatory cause. I believe that

without the inflammatory starting-point, consumption is impossible.

Dr. Flick said: I felt considerable hesitation in presenting this paper, as I knew that the opinions expressed were in conflict with those of many on the subject. I have strong convictions on the subject, however, as I have myself been the unfortunate victim of the disease. I have given the matter a great deal of thought, and have observed the effect of many remedies and of hygienic conditions. I do not know that those who have discussed the paper got my exact ideas on the subject. I hold that consumption is entirely dependent for its initial starting-point on malnutrition. I hold that without malnutrition and malassimilation such a thing as consumption can not take place. I think that when one is run down he is then a fit subject for the bacillus tuberculosis, and unless he is run down and his digestive apparatus is out of order, he will never fall a victim to phthisis, no matter of what his parents or his grandparents died.

The objection based upon the fact that nurses in hospitals do not contract the disease from their patients, is not well grounded. The nurses and others connected with a hospital are generally well nourished, as they get everything that is necessary to keep up their condition. When they get below par they fall victims to the disease.

I believe that no consumptive patient derives benefit from climate in itself. The benefit comes from the change of life and from the out-of-door life. If the patient lives an out-of-door life and takes nourishing food he may recover. If he goes to any climate and stays in the house he will die.

With regard to the relative frequency of the disease in males and females, I would state that my statistics are drawn from the census reports of the United States.

I have no doubt that inflammatory conditions of the lungs have some bearing on the production of the disease, inasmuch as a person who has had pneumonia is left in a depressed condition. I think, however, that a mistake in diagnosis is often made. I believe that a case is often considered to be one of pneumonia, when really it is a case of phthisis. It is said that pneumonia has run into phthisis, when in reality it was a case of phthisis from the beginning.

I have brought this subject forward with the hope of exciting discussion. This a matter that is too much neglected. There is no disease that causes as many deaths

as does consumption, yet we have become so accustomed to it that we do not give it the attention it deserves.

The Treatment of Habitual Constipation.

At a time when, not only the tedious proceedings of massage, but actually manipulation of the abdomen by cannon-balls (*vide Journal* for November 26th), is recommended for chronic constipation, a far simpler and more effectual way of inducing peristaltic action of the bowels, which has recently been discovered, should be brought to the knowledge of the profession generally. This consists of the injection into the rectum, by means of an ordinary glass syringe, of about half a teaspoonful or a teaspoonful of glycerine.

The fact that glycerine thus used causes a ready action of the bowels was apparently discovered by a Dutch physician, Dr. Oidtmann, of Maastricht, who, however, deprived himself, at least to a great extent, of the credit of this discovery by advertising it as a nostrum in several medical journals. Dr. Anacker, of Château-Salins, who purchased the specific and found it to answer the purpose well, took the trouble to analyze the fluid supplied by Oidtmann for such injections, and found it to consist principally of glycerine, to which a small quantity of a preparation of conium and a sodium salt had been added. Dr. Anacker found that glycerine alone, without conium or the sodium salt, had exactly the same effect as Oidtmann's mixture.

On reading Anacker's paper in the *Deutsche Medicinishe Wochenschrift* for September 15th last, I lost no time in giving this proceeding a trial. A number of patients, including some medical practitioners of great experience in the treatment of this troublesome disorder, have spoken to me in the highest terms of the value of this new plan. An evacuation generally takes place either immediately or within a few minutes after the injection. The explanation of the effect given by Anaker, and which is no doubt the true one, is this: Glycerine, when brought into contact with the mucous membrane of the rectum, withdraws water from it, thus causing hyperæmia and irritation of the sentient nerves of the rectum, which in turn leads reflexly to powerful peristaltic contractions, ending in defæcation. The larger the accumulation of fæces, the greater is the effect. There is no discomfort or pain, but the action takes place *cito, tute*

et jucunde. Sometimes, however, a little throbbing is felt in the rectum for a few minutes afterward. I feel sure that this plan, on account of its simplicity and readiness, will be found to constitute a veritable improvement in the therapeutics of constipation.—*Julius Althaus, M.D., in British Medical Journal.*

Antipyrin in Surgical Fever.

BY G. E. CRAWFORD, M.D., CEDAR RAPIDS, IOWA.

My attention has been called during the last few months to the value of antipyrin in surgical fever.

I think there is no class of cases where the action of the new antipyretics, antipyrin and antifebrin, is more salutary than in the hyperpyrexia of traumatic or inflammatory origin.

The certainty and rapidity with which a gramme of antipyrin will reduce the high temperature, and quiet the restlessness and nerve tension, and frequently the pain of a violent reaction following an injury, is marvelous as well as gratifying.

The following case will illustrate:

Frank H., while in a state of profound intoxication, was backed over by a freight car and his right arm crushed from the elbow to the shoulder. He was taken to St. Luke's Hospital, and I amputated at the shoulder joint.

The shock was very great, and when reaction came on it was violent, the temperature reaching 105° F., with pain and restlessness which opiates did not control readily. I gave him 16 grs. antipyrin, and in three hours the temperature was 100° F., pain relieved and patient resting comfortably. The perspiration was most profuse, but little prostration followed.

By the next day the high temperature had returned and the antipyrin was repeated with the same results.

For the next two or three days the antipyretic was given once or twice daily, as needed to keep down the high fever, after which it subsided, and the patient went on to a good recovery.

In the hospital at the same time, under the care of my colleague, Dr. Skinner, was a patient who had received a fracture of the base of the skull, by falling from a bridge. There was high temperature and active delirium. All of

these symptoms were controlled by antipyrin better than by any other means.

I think the action of antifebrin is in some respects more pleasant than that of antipyrin, and less likely to be followed by cold extremities and prostration.

In a recent case of difficult labor, with profuse hemorrhage and great prostration and considerable injury to the soft parts, which was followed by an alarmingly high temperature, I used antifebrin with the most gratifying results.

We certainly possess in these agents most valuable additions to our medicinal armamentarium, and their field of usefulness is very wide.

Double Fracture of Humerus, Caused by Muscular Contraction.

REPORTED BY L. G. LEBEUF, M. D., HOUMA, LA.

On August 28, at a base-ball game, the pitcher of our local nine, Mr. C. P. Smith, our Mayor's brother, while throwing a "curve" ball broke his arm. About five hundred persons there, at a distance of thirty yards, state that they heard a distinct snap, such as is often heard in dry cane-brakes. Patient having been brought to my office, in great pain, was immediately placed under the influence of an anæsthetic. After a careful examination I found two distinct and separate fractures in the same bone. A fracture a little below the surgical neck of right humerus was plainly shown, not only by crepitus, but also by a marked deformity, upper fragment being drawn toward the chest, while lower seemed to be drawn outward. This fracture being reduced and held tightly *in situ* by an assistant, another fracture of an oblique character was found and closely examined at about the lower third of shaft. A rectangular splint with plaster of Paris bandage was used on the spot and kept eight weeks, when solid union and perfect result was derived.

Fractures caused by muscular force, though not unfrequent occurrences, rarely happen, as this, in two places in the same shaft, unless there exists some predisposing cause; but in this instance patient was a strong, healthy, muscular man, æt. 28, who had no previous constitutional trouble of any kind.—*N. O. Med. and Surg. Journal.*

Microscopy.

Bacteria from a Botanical Standpoint.

BY PROF. WM. TRELEASE,
Member of the Faculty of Washington University.

Read before the Alumni Association of the St. Louis Medical College, January 18, 1888.

Bacteria.—As a layman, I feel some diffidence in addressing an association of professional men, some of whom are far from inexperienced in the subject that I have been asked to present. Indeed, the only excuse that I can offer for appearing before you is to be found in the close relation that the science of botany bears to that of medicine. I trust, therefore, that the feeling may be understood which prompts me to consider my subject from the botanical side, and in its bearings on laboratory, rather than clinical work.

History.—Although bacteria have been known since the time of Leuwenhoeck, who recognized certain of them in 1675, and various attempts to classify them have been made, beginning with that of Mueller, in 1773, bacteriology as a science can scarcely be said to extend further back than the year 1872, when Professor Cohn, of Breslau, published the first of a series of memoirs on the subject. While the study of bacteria has, in the past, been made, on the one hand, largely by botanists, and on the other by medical men, it is now passing into the hands of specialists, whose training has been that of the best medical schools; and whose familiarity with the microscope and its accessories, and with the most approved histological methods is unsurpassed.

Classification.—The position of bacteria, in the organic world, has often proved puzzling. Could we adopt the convenient method of recognizing an *omnium gatherum* for the lowest living beings, such as is afforded by the Protista of Haeckel, it might include the bacteria, which combine some of the characteristics of animals with those of plants. Such a group, however, fails to give satisfaction, because it needs frequent revision as natural history progresses. Nor does it appear to please either the zoölogist or the botanist, who are not satisfied unless they can range every organism in one or other of the great kingdoms of nature. Without

stopping to discuss their animal relationships, I may say that there is, to-day, little reason for disputing the vegetable nature of bacteria, first recognized by Cohn, in 1853; nor can there be much doubt that they stand at the foot of the ladder.

Although it fails to give satisfaction in some of the details of its application, one of the most philosophical attempts to classify the thallophytes, or lower cryptogams, is that which recognizes four principal groups, protophytes, zycophytes, oophytes, and carpophytes, each composed in part of fungi, and in part of algæ, while lichens fall bodily among the carpophytes. Bacteria fit in the first of these groups very naturally. Strictly speaking, they are unicellular plants, without a nucleus, so far as is now known; their homogeneous protoplasm vacuolated at certain periods of growth, and invested with a gelatinous wall or sheath, through which vibratile cilia or flagella may protrude.

Life History.—Their development and transformations are quite as simple as their structure. Fission, in one or more planes, gives origin to new individuals, which continue to increase in geometrical progression until the supply of food fails, or they feel the influence of unfavorable conditions, to which some species appear to readily succumb, while others promptly form internal spores, more resistant than the vegetable cells. When the period of danger is over, new vegetation is begun. Sexual reproduction is entirely unknown among them.

While bacteria are unicellular, in that each cell may perform all the functions of the species it belongs to, they by no means always occur as isolated cells. On the contrary, the gelatinous wall that surrounds a cell most frequently retains its continuity so as to inclose the daughter cells for a considerable period of their existence. As a result of this cohesion, filaments arise, like those of the hay bacillus (*B. subtilis*), and the common water cladothrix (*C. dichotoma*) films, the so-called mycoderma, may form on the surface of fluids; or solid or semi-fluid masses—zoögleæ—may appear, such as are well known in cultures on potato.

Size.—The individual cells that compose these colonies are often extremely minute. One one-thousandth millimeter is a common diameter for micrococcus cells, so that a billion of these might lie within the limits of a cubic millimeter, and yet leave a considerable part of the space unfilled. Some species fall even below this size, while, on the other hand, a

considerable number exceed it, yet without ever becoming more than excessively minute bodies.

Physiology.—Bacteria are sometimes for convenience classified according to the effects they produce, as phosphorescent, chromogene or pigment-forming, saprogene or putrefactive, and pathogenic species. But such a classification may be misleading at times, for it has been abundantly shown that some of the zymotic germs produce characteristic pigments, and there is much reason for believing that some of the most virulent of them are capable of multiplying as saprophytes in fluids containing organic matter, from which, in one way or another, they infect the animals they are capable of causing disease in.

The relations of bacteria to their surroundings are worthy of far more consideration than can be given them in the time at my disposal. Delicate to the last degree, while in active vegetation, some are killed by drying in the air; others can not survive a comparatively slight increase in temperature above that at which they thrive best; the effect of frost on some disease germs is well-known; the presence or absence of a limited amount of oxygen may decide between the life and death of others; while some of the most dreaded pathogenic species that enter through the alimentary canal are unable to survive the acidity of a healthy stomach, containing something to become acid over. Other species are sensitive to light, one of these to such a degree that its discoverer, Engelmann, of Utrecht, called it *bacterium photometricum.*

One of the prettiest physiological methods of the decade is that of Engelmann, based on his discovery that the movements of common septic forms are closely dependent upon the presence of oxygen. So sensitive are they in this respect that an infinitesimal quantity of this gas may be detected in a drop of fluid by their behavior, a quantity very greatly below that recognizable by any known chemical method. By using this test for the liberation of oxygen, which is a regular attendant of assimilation in the sense in which botanists use that word—it has become possible to study this important process, not only in individual cells, but in their several parts, in pure monochromatic light of sufficient intensity from any part of the incandescent spectrum.

Rapidity of Multiplicatiou.—Small as they are, bacteria are by no means insignificant. Like aphides and other

small insect pests, they possess the power of multiplying with great rapidity, but they far exceed their most active competitors in this respect. Cohn has calculated that a species undergoing fission once an hour, which is not too high an estimate for some species, under favorable circumstances, might count nearly seventeen million offspring at the end of twenty-four hours, while in about a week, the number could be represented only by the use of fifty-one figures, so that it is practically meaningless to the ordinary mind; but to give some means of comparison, he calculates the space that these microscopic beings would occupy if each were about twice the size of that which I have spoken of, and finds that in five days the progeny of a single cell, if all survived and were equally prolific, would occupy 928,000,000 cubic miles, the volume of the ocean. Of course, their reproduction is checked greatly by unfavorable conditions and by their enemies, but what wonder if the germs of putrefaction and disease are well-nigh omnipresent?

Nutrition.—Though bacteria are exceedingly minute and simple beings, we have seen that their power of multiplication, if unchecked, is incomprehensibly great. Their influence on higher organisms is also entirely disproportionate to their size. Containing no assimilating pigment, they resemble other fungi, as well as animals, in being dependent upon organic matter for their nutrition; hence they must live either as saprophytes, utilizing the substance of dead animals or plants, or as parasites, obtaining their food from living beings—often at the expense of the health or life of the latter.

Effects Produced.—Most persons are doubtless inclined to look upon bacteria, as they do upon insects, as noxious. Unfortunately, in the case of many species this is true, from our standpoint. Milk sours, butter becomes rancid, and meat decays in our pantries; the florist finds his hyacinths rotting; and the horticulturist loses his pear and crab trees by fire-blight; our horses are glandered; the great American specialty dies of swine plague; our dogs run mad; cattle and sheep die in thousands of anthrax; and man, himself, is not exempted from such terrible diseases as septic poisoning, smallpox, diphtheria, cholera, yellow fever, tuberculosis, and numerous other zymotic diseases, far better known to you than to me, results attributable, with more or less foundation in fact, to the action of bacteria.

But the story is less than half told when the harmful species have been enumerated. We should scarcely know ripe cheese were it not for the butyric ferment. Vinegar would be unknown were there no bacteria. Dead animals and plants would remain as unsightly and cumbrous blots upon the earth, awaiting the slow process of oxidation, and largely useless for re-entrance into the cycle of life, without their kind offices. Possibly some of the digestive processes of ruminants—and perhaps other animals—could not be carried on without their aid; and without the nitrification of the soil through their agency, the amount of nitrogen available for plant nutrition would be so small that it may well be questioned whether there would be any considerable vegetation, without which animal life, as we know it, would be impossible. Let us, therefore, recognize our friends among these smallest, yet most important of living beings, while we endeavor so to know our enemies, that we may reduce their influence to a minimum.

Morphological Characters.—The individual cells of different bacteria range from spherical or slightly ellipsoidal (*micrococcus*) to oblong or cylindrical (*bacterium*) or corkscrew-shaped (*spirillum*). Their size, mode of multiplication, and such internal structure as can be made out directly, or by the aid of reagents or staining fluids, furnish additional aids in the distinction of species. But each of the characters is usually variable within certain limits, in a given species, and the limits of variability of closely related forms not infrequently overlap, in one respect or other, so that the most experienced investigator might be pardoned for declining altogether to pronounce judgment on a species that he was perfectly familiar with, if it were presented in a fluid culture, or even in a mounted slide, well stained, but from a source of which he knew nothing.

But while the morphological characters of bacteria, as seen under the best microscopes, may fail when taken alone for discrimination between related species, what must be regarded as invisible structural differences, render it possible to stain one species with a pigment that is not taken up, or is readily parted with, by another, very similar in other respects. In illustration, I need only recall the *bacillus* of tuberculosis, and the similar germ of leprosy—now distinguished by their different behavior with reference to staining agents.

Fluid Cultures.—Where the species are isolated in pure

cultures, microscopic characters are often the most valuable attainable. For many purposes, cultures in suitable nutrient solutions in carefully sterilized and plugged flasks and tubes, are useful, especially in the study of species which form characteristic mycoderma pellicles, or diffusible pigments. Cultures of this kind have been much used by both advocates and opponents of the theory of spontaneous generation as applied to lower organisms, and we owe to them many of the brilliant results attained by Pasteur and Tyndall. Indeed, the Pasteur school still makes constant use of fluid cultures. But a serious objection to their employment lies in the ease with which a foreign species, introduced into a flask by accident, may spread through and contaminate the whole.

Potato Cultures.—For most purposes, pure cultures on solid media are preferable to those in fluids. The simplest of these is potato that has been thoroughly washed, rinsed in dilute corrosive sublimate, and steamed or slowly boiled so as to be cooked without falling to pieces. The potato is taken from the boiling water in a thoroughly disinfected spoon, halved with a sterilized knife, and placed in a dish under a glass cover—both of which, after being made chemically and optically clean, have been well sterilized by rinsing with a one-tenth per cent. solution of corrosive sublimate, or by exposure to a high temperature for some time. By means of a platinum needle, cleaned and heated shortly before it is used, the merest trace of fluid or zoöglea to be cultivated, is transferred to the cut surface of the potato and distributed by making a slight scratch with the point of the needle, after which the cover is replaced, and the culture, duly numbered and labeled, is set aside to be examined at intervals, for the purpose of taking notes on the appearance of the inoculated scratches. Some cultures are found to thrive best when shielded from light, these are kept in closets; others stand on the tables of a well-lighted laboratory; still others are maintained at elevated temperatures that may be controlled within narrow limits by the use of brood-ovens.

With all precautions, many cultures of this sort are contaminated by germs from the air, but in from one to three days the inoculation lines of most of them show, here and there, or for their entire length, minute, mostly hemispherical zoöglea masses, some of which have developed from isolated cells left by the inoculating needle. If the culture

contains more than one species, the fact is easily recognized, from the different appearance of the zoöglea dots, each of which may be made the starting point for a new inoculation; or, in case the common "weeds" of the laboratory have intruded, the desired species only is removed to a new culture, and the rest are destroyed. For greater security, potato that has been mashed and made into paste of suitable consistency, after cooking, is sometimes put in plugged test-tubes, and sterilized, after which it is inoculated similarly to gelatinized media.

As a result of the lobing and confluence of the colonies, their varying texture and surface as they mature or become dry, and the pigments that some of them secrete, many bacteria are easily known at sight, when grown on potato, though no study of them is complete even from a botanical standpoint until they have been examined living, under the best powers of the microscope, and a thorough comparison is made of permanent preparations, colored with suitable staining fluids.

Transparent Solid Cultures.—By far the best methods, however, are those introduced by Koch, and applied by him and his school to the investigation of many species of chromogene and pathogenic bacteria. In these, the potato is replaced by a transparent substance which can be impregnated with any desired nutrient solution, and sterilized thoroughly. Where the temperature need not be elevated, from five to ten per cent. of gelatine, neutralized or rendered slightly alkaline by the addition of sodium carbonate, is added to a suitable decoction of meat or other organic matter, and, after cooking and filtering, a few cubic centimeters of the mixture is placed in each of a number of sterilized test-tubes, that are subsequently plugged with sterilized cotton, over which a layer of filter paper has been placed, in some cases to prevent the introduction of molds, the mycelium of which is sometimes able to pass through cotton alone. The contents of the tubes are then sterilized by protracted boiling, or preferably by boiling for about ten minutes at a time on four or five successive days, which is more certain, inasmuch as a single boiling kills the vegetative germs; while in the interval, possible spores that may have survived one or more exposures to the elevated temperature, are given opportunity to vegetate, so that their progeny is destroyed by the next cooking. After cooling, each tube is inoculated by removing the cotton plug while

the tube is inverted, and scratching or pricking the gelatinized matrix with a needle that has been carefully fired, and, when cold, dipped into the material from which the culture is to be started. Contamination of such cultures is rare, if each step has been properly taken, and the growth of the colonies of bacteria is followed even better than on potato. Instead of test-tube cultures, slide cultures may be started by pouring a sufficient quantity of the sterilized solution on sterilized glass slips, where it is allowed to harden. After inoculation, the slides are kept in suitable chambers, to prevent evaporation and infection. For some purposes, this method has advantages over the use of tubes, but the cultures are more liable to contamination by extraneous germs.

Some species develop well only at a more or less elevated temperature, often above the melting-point of gelatinized solutions—which is about 25° C. These are grown in a medium prepared by adding one and five-tenths to two per cent. of agar-agar to the nutrient solution, which then melts only at 40°–42° C. One of the peculiarities of certain species is, that they liquefy the gelatine medium in their growth. On agar-agar, however, their zoöglea may develop characteristic forms, without this drawback.

For some species, especially pathogenic forms, serum, obtained by causing the coagulation of blood carefully drawn from a freshly slaughtered animal, is sterilized by exposing it in sterilized and plugged tubes to a temperature of about 58° C. an hour each day for about a week. While this does not coagulate albuminoids, it destroys bacteria that are in active vegetation, any spores that may have formed being allowed to germinate in the intervals between the different sterilizations. The serum is then solidified—but not coagulated—by maintaining the tubes at a temperature of 65°–68° C. for a half-hour or more. When necessary, the nutrient power of this medium is increased or modified by the addition of beef infusion, etc. Cultures on serum are conducted essentially as when gelatine is used.

Gleanings.

NOTHNAGEL ON THE OERTEL METHOD FOR THE TREATMENT OF HEART DISEASE.—In a recent clinical lecture on the treatment of heart disease, Professor Nothnagel said

that he considered the method of Oertel superfluous, and even inadmissible, in cases of compensation of valvular affections of the heart, or in affections of the cardiac muscles, when there is no degeneracy present, as each excitation of the heart had to be avoided in that period. The different authors were of the same opinion as to the part which the reduction of liquid food played in that method; but the good results obtained by it in heart diseases were due to the methodical ascensions which were executed by the patients, and there was much reason to believe that these ascensions augmented the cardiac action and the energy of the myocardium. When a muscle was irritated twice a day for some minutes, an augmentation of the volume and the weight of the muscle was obtained after some time, a fact of which Professor Nothnagel had been able to convince himself by experiments performed for about a year and a half. The same was true of the cardiac muscle; the hypertrophy of the heart in valvular affections was produced by mechanical conditions, and, owing to this hypertrophy, there took place a compensation of the circulating disturbances. As, however, the hypertrophy did not exceed a certain degree, the muscle thus hypertrophied soon became degenerated, and a new stimulant was necessary for hypertrophying it again. The methodical ascensions prescribed in the method of Oertel played the part of such a stimulant; but they had to be carefully watched by the attending physician.

Gonorrhœa.—Dr. Burgeois, a military surgeon, vaunts, in the *Archives de Médicine Militaire*, antiseptic injections in the treatment of gonorrhœa. The affection, according to the author, is so much shorter if the antiseptics are employed, and the anti-phlogistic and the emollient treatment of the first days would be useless. The antiseptic to which he gives the preference is the permanganate of potash in the proportion of five centigrams to one hundred grams of distilled water. Four injections should be employed daily at proper intervals. The liquid should be tepid, and it should be injected, according to the practice of Professor Guyon, by means of a small glass syringe in a divided quantity; the first half being intended simply to wash out the canal, the liquid is allowed to run out immediately; the second should be retained a few minutes. Soap-water or lemon juice easily removes the brown stains the medicine leaves on the fingers and linen. Forty-two patients thus treated from the

commencement were completely cured, without any complication or relapse, in nineteen days on an average, the extreme limits having been from six to thirty days.—*Paris Letter in American Practitioner and News.*

The After-treatment of Difficult Laparotomies.—P. Muller, of Berne, reports a case in which adhesions took place between the anterior and posterior walls of the abdomen over an extent of 25 cm., im such a manner as to include a knuckle of small intestine. In order to prevent such accidents he advises the avoidance of bandages which exert pressure in all cases where there are extensive wound surfaces in the peritoneum. In the second place he proposes to prevent adhesions by filling the abdominal cavity after laparotomy with a sterilized neutral solution. He employed this method in a case in which he found extensive adhesions, using 2,400 grams of a 0.7 per cent. solution of salt, which he poured into the abdominal cavity, through a drainage tube introduced into the upper angle of the incision. This sufficed to fill up the cavity occupying as much space as the tumor had previously taken up. Soon after the operation the patient was seized with dyspnœa and the pulse ran up to 150. Then profuse diaphoresis and diuresis gradually relieved the artificial ascites, which disappeared by the sixth day. The results with regard to the prevention of adhesions were entirely satisfactory. The writer believes that it is unsafe to employ as large a quantity of the solution as he did in his own case, but he intends to experiment in the same direction with smaller quantities, to be thrown in every three hours by means of the double canula, or to be employed by means of permanent irrigation.—*Centralbl. für Gynäk.*, No. 25, 1887.

The Effect of Hyoscine Hydrochlorate.—Kobert, of Dorpat, Russia, is quoted as follows by *Schmidt's Jahrbuch*, 1887, No. 7, in the results of his use of this drug as a sedative:

Hyoscine, when given in large doses, is excreted as such by the kidneys. A small amount of the urine of an animal thoroughly under the influence of hyoscine, when dropped upon the heart of a frog which has been poisoned with muscarine, will cause the heart which was quiescent to beat. Hyoscine is thus an antidote to muscarine. In the same way, muscarine by its stimulant power over the pneumogastric,

will cause a heart to beat which has been stopped by hyoscine. The effect of the drug is the same upon the human subject as upon the frog. In the case of a patient with melancholia, whose pulse was slow, an injection $\frac{1}{60}$ of a grain produced a very perceptible acceleration. In small doses, of $\frac{1}{120}$ to $\frac{1}{60}$ of a grain, hyoscine is a weak narcotic to healthy beings. Numerous observations made upon the large number of patients at the Dorpat Clinics for Insane Patients have proved its excellence as a reliable hypnotic, when given subcutaneously in doses of $\frac{1}{120}$ to $\frac{1}{60}$ of a grain of the hydrochlorate. A peculiarity of the use of hyoscine was the absence in the cases noted of all ill after-effects produced by the drug.—*Therapeutic Gazette, Aug.* 15, 1887.

The Early Recognition of Hip-Disease.—The symptoms are as follows (not, however, in the order necessarily in which they present themselves):

1. Limp. It is perhaps neither severe nor constant, but more marked in the morning on rising and gradually wearing away during the day.
2. Pain. Sometimes slight and sometimes very severe. It is usually referred to the inner side of the knee; and is liable to exacerbations. Later on a paroxysm of pain occurring at night is symptomatic of bone lesion, and called the osteitic cry.
3. Altered position. Very early the limb is slightly flexed, a little later abducted and rotated outward.
4. Loss of motion in the joint.
5. Wasting of the limb and flabbiness of the muscles. Flatness of the natis is not of much significance.
6. Swelling, when present, may be recognized in front of the capsule or behind the trochanter, or by a brawny thickening about the joint.
7. Sensitiveness of the joint.

Not all these symptoms may equally be present; one or more may be strongly marked and others in abeyance.—*Prof. A. J. Steele, in St. Louis Cour. Med.*

Cocaine as an Anesthetic.—A great deal of minor surgery can be done without any suffering of the patient by its use, a four per cent. solution being the strength generally employed. Inject in and around the part; allow five minutes before operating.

Wounds of the Palmar Arches.—Thiriar, of Brussels, summarizes his views in a recent lecture, as follows: The safest and best plan is to ligature in the wound if possible; if not, above it. In recent cases it can usually be done in the wound. Where it is necessary to tie higher up, it is of no use to tie the ulnar and radial; and if the wound is not very recent, and there has been time for a considerable amount of collateral circulation to have developed, even the brachial must be tied above the profunda. It is necessary to remember that the axillary artery sometimes gives off two brachial branches as high as the axilla itself. M. Thiriar examined a large number of arms in the dead-house, and found this anomaly present in twelve per cent. of the cases. However, he has always succeeded in arresting hemorrhage in wounds of the palmar arches, even when the tissues were suppurating, by a modification of Sir J. Simpson's plan of acupressure. He uses needles curved to a semicircle, and, passing them under the artery, brings the edges of the wound together, and occludes the vessel by the application of a twisted suture, which there is no need to draw very tightly. He summarizes his advice thus: 1. Direct ligature. If possible, 2. Twisted suture and acupressure. If unsuccessful, 3. Ligature of humeral in the middle, if the collateral circulation has not had time to develop; above the profunda, if it has. 4. Employment of compression, direct or indirect, forced flexion, forcipressure, styptics, etc., only as temporary expedients.—*Lancet.*

The Mechanism of Cyanosis.—At a meeting of the Æsculapian Society of London (*Lancet*, December 3, 1887), Dr. Alexander Morrison read a paper on the mechanism of cyanosis, which included a synopsis of seventy-five collected cases of cardiac malformation. This paper was the sequel of one read before the Society on February 18, 1887, on the case of a child seven years old, in whom fatal cyanosis was found on *post-mortem* examination to have been associated with the following physical conditions: The ductus arteriosus was closed, the pulmonary artery narrowed to an eighth of an inch, the septum of the ventricles imperfect at its base, the aorta arising at this point from both ventricles. Cyanosis was present from birth, and had become most marked during the last two years. It was attended with severe attacks of dyspnœa. Dr. Morrison regarded the state of the ductus arteriosus in relation to the pulmonary artery as most

important. The former channel was open in forty-six of his collected cases, closed in eighteen, and doubtful in the rest. He found that in the first group cyanosis appeared earlier, and the duration of life was shorter than in the second. As regards the mechanism of cyanosis, he considered the chief, though not the only agency at work, to be a diminution of the aspiration exercised by the lungs.

Diphtheria in a Dissecting-room.—Some little excitement has been caused in Lyons by the death of a medical student from diphtheria, which, according to the newspapers, he contracted from a subject he had been engaged in dissecting. To this assertion the dean of the faculty wrote a distinct denial, stating that the bodies of patients dead of diphtheria are never sent to the dissecting-room. This, however, did not satisfy everybody, for a rejoinder appeared, signed "A group of *externes*," declaring that the child whose body had been dissected had died of croup. According to *La Province Medicale*, the cause of death was meningitis. Though the practitioner who sent the case to the hospital had diagnosed it as one of diphtheria, the house physician had been unable to find any evidence of diphtheria, and the little patient died the same night that it was admitted. Even if the child had had diphtheria, *La Province Medicale* thinks it is extremely doubtful whether the theory of infection could be maintained, for it is not by any means certain that dead diphtheritic membrane can convey infection, especially after the lapse of eight or nine days, which was the period that had intervened between death and dissection. In addition to this, the unfortunate student had not touched the thorax or throat, having been engaged merely with the brain.—*Lancet.*

Hypnotism and the French Laws.—The *Lancet* reports that a schoolmaster has recently been charged, at the Assizes of the Nievre, with indecent assaults upon children under his care. At the previous sessions he had admitted the offense, but declared he had acted under the influence of an irresistible impulse. The court had in consequence postponed their decision, pending the medical examination of the accused. The medical witnesses have concluded that the case is one of hysteria, and that hypnotic sensibility being developed to a high degree, the subject is only responsible to a limited extent; and an intelligent jury pronounced a

verdict of acquittal. It would be interesting to know whether these enlightened experts would have come to the same conclusion had the assaults in question been made upon their own children, and what would then have been their views on hypnotism.

Lead Poisoning from Flour.—The *British Medical Journal* reports that a very remarkable epidemic of lead poisoning has recently been investigated in three communes in the north of France. Upward of one hundred persons were suddenly attacked with violent symptoms, among which severe colic predominated. So serious did the condition of some of the sufferers become, that medical aid was obtained, and the presence in several patients of a characteristic blue line on the gums gave rise to the suspicion of lead poisoning. The water supply was derived from so many different sources that it could not be incriminated, and suspicion ultimately fell on the flour.

It was ascertained on inquiry that the affected persons had all obtained their flour from the same mill, but those who had partaken of rye bread were most severely attacked. The mill was gone over, and after a very long and painstaking examination, attention was directed to the tin buckets of the elevator which served to transport the rye flour from the grindstones. Several of these buckets had a dull, leaden appearance, and were found to have been "tinned" with lead. As doubts were entertained whether the quantity of lead from this source was sufficient to give rise to such severe symptoms, they were carefully weighed, and were found to have lost upward of five ounces of their weight. The wheaten flour, which passed through another elevator, was free from lead, and this was evidently due to none of these "leaded" buckets having been employed in its construction. The accuracy of the discovery was confirmed by the observation that those who ate rye bread exclusively were most severely attacked, while the others, who mixed the two flours, escaped with comparatively slight symptoms.

A Revolt of Venereal Patients in an Italian Hospital.—At the hospital of Santa Maria, at Naples, where a number of women suffering from specific diseases are under treatment, the authorities had forbidden the friends and paramours of the patients from calling upon them. This was followed by an open revolt for eight hours, during

which the furniture of the hospital was demolished, windows and doors broken, and twenty-two of the Sisters of Charity in attendance were injured more or less severely. The patients attacked the police, and wounded several. Order was finally restored, and twenty-eight arrests were made. A reform in hospital management is evidently needed.

Sewer-gas Poisoning in a Young Women's School.—The *Sanitary News* of December 10, 1887, reports a recent instance where a large and well-built and expensively built house, in a particularly exclusive and perfectly well-cared-for thoroughfare of an Eastern city, was taken as the home of a young ladies' school. Before its occupancy plumbers were set to work to tear out and renew whatever tearing-out and renewing were necessary to constitute perfect safety from sewer emanations. Even the stationary wash-bowls were removed from all the rooms, and bowls with pitchers substituted as a special precaution. At last the plumber—one of the largest, and wealthiest, and most reputable in the city—who had not been limited in any necessary expense, pronounced the plumbing-work in the house as good as it could be. The school moved in and for a considerable time all went well. After a while, one of the young ladies, and then another, then a third, was taken suddenly and mysteriously ill with violent headache, fever, vomitings and other unmistakable typhoid symptoms. The school was at once closed, and a New York sanitary engineer of much more than local reputation was commissioned to discover the cause. He found it in sewer-gas, escaping here and there about the building through leaky joints, ill-made connections, and criminal botch-work of many descriptions, which, by the aid of plaster-of-Paris, or behind wood-work, or under floors, had been covered up and left to breed disease by the conscienceless plumbers. It is significant to note, notwithstanding all the defects found by the engineer on detail examination, that the well-known and so-called perfectly reliable peppermint test, which was first made by him, revealed no leaks whatever, except a scarcely perceptible odor in the bath-room.

The Contagion of Diphtheria.—The *Sanitary News* of December 10, 1887, reports cases of diphtheria in Michigan, in which the health officer has traced the contagion which caused a severe attack of diphtheria in St. Joseph's Orphan Asylum, and has found that a mother and child had diph-

theria in Sault Ste. Marie last spring. The mother died. The woolen dress which the child had worn was packed in her trunk and brought to Marquette. After being unpacked a short time ago diphtheria soon appeared.

Book Notices.

THE RULES OF ASEPTIC AND ANTISEPTIC SURGERY.—A Practical Treatise for the Use of Students and the General Practitioner. By Arpad G. Gerster, M. D., Professor of Surgery at the New York Polyclinic; Visiting Surgeon to Mt. Sinai Hospital and the German Hospital, New York. Large 8vo. Pp. 332. Cloth. New York: D. Appleton & Co. Cincinnati: R. Clarke & Co. Price, $5.50.

This is an important work, and, at this time, a very valuable one. We think that not only every surgeon proper, but every practitioner of medicine who practices surgery, should have it and read it. In stating the object of it, we can not do better than to quote the language of the author, as he expresses it, in the preface: "The object of this volume," he says, "is a systematic, yet practical presentation of the Listerian principle that has revolutionized surgery within the last fifteen years. Its adoption has wrought so many incisive changes in practice; has shifted the surgeon's standpoint regarding all the important disciplines of the art in such a radical manner, that most English text-books of surgery, even those recently published, have become partly or entirely inadequate to the wants of the modern physician."

Surgeons until recently taught that, if a wound did not heal by "first intention" by bringing the edges in contact by sutures or adhesive straps, suppuration necessarily followed. But experience has demonstrated, our author states, that a wound, however large, will heal without suppuration, though its walls be not in contact, if it is kept entirely free from contact with the dry filth of the atmosphere called dust, which is largely composed of living organisms, or fungi, named Schizomycetes, better known by the designation of *bacteria* and *micrococci*. Exclude these, and the reparative process will begin, proceed, and be completed without a drop of suppuration.

Albuminoid substances, as blood or blood serum—in fact, all the tissues of the dead animal body—will become putrid under certain well-known conditions. They are *moisture*, *warmth*, and the presence of *dry filth—dust*—which is made up of living cells or fungi—bacteria and micrococci. The first two are necessary for the development of the last mentioned, when they have fallen upon a suitable soil. So soon as these living organisms have found lodgment in a wound, they set up immediately a fermentative process known as decomposition.

Dr. Gerster says, that it can not now be successfully denied that the surgeon's acts determine the fate of a fresh wound; and that its infection and suppuration are due to his technical faults—faults of omission or commission. It is the immortal achievement of Lister to have first attributed to fermentative influences the disturbances of repair; and to have led wound-treatment into a rational, hence successful, direction.

The work is divided into five Parts: Part I. is devoted to *Asepsis*, and Part II. to *Antisepsis*. The various chapters of Part I. explain what is meant by Sepsis and Asepsis, and describe aseptic wounds and aseptic treatment. Those who are acquainted with the methods of sterilizing instruments, and the manner of keeping up constant sterilization of parts during an operation, know that the processes are exceedingly complicated. All the details, however, are minutely described in the work before us.

Parts III., IV. and V. treat of the aseptic and antiseptic treatment of Tuberculosis, Gonorrhea and Syphilis. The tuberculosis, which the author makes principally the subject of the new treatment is, cutaneous tuberculosis, tuberculosis of bone, of tendinous sheaths, of the mucous membrane, etc.

As we stated at the outset, both physicians and surgeons will find the work an exceedingly valuable and interesting one—a work worthy of attentive study. It is the best exponent of "the new surgery" that has yet been published. No one should attempt to perform a surgical operation without first familiarizing himself with its contents.

A Practical Treatise on Diseases of the Skin. By John V. Shoemaker, A.M., M.D., Professor of Skin and Venereal Diseases in the Medico-Chirurgical College

and Hospital of Philadelphia; Physician to the Philadelphia Hospital for Diseases of the Skin, etc. With Colored Plates and Other Illustrations, etc. 8vo. Pp. 633. New York: D. Appleton & Co. Cincinnati: R. Clarke & Co. Cloth, price $5.00.

THIS is an entirely new work upon diseases of the skin, by one who evidently has had very large observation and experience in those affections. Dr. Shoemaker not only has long been a practitioner in the specialty of venereal and skin diseases, but also has been a teacher in the department of medicine devoted to them. No one certainly is more competent to write a work upon them than he.

Although the volume is of large size, the author has endeavored, as far as it was possible, to study conciseness in the treatment of the various subjects. It has, therefore, been his constant aim to present brief though clear descriptions of the numerous affections of the skin. Our readers are aware that the diseases of the skin are legion; and if, therefore, each affection were fully described, its pathology and history given at length, and the treatment discussed in detail, two or three large volumes would be filled instead of a single moderate-sized one.

In the preparation of the work, the author has purposely omitted many cumbrous, technical words and phrases which would tend to confuse and mislead the student, and in their stead has substituted words and phrases well understood and fully conveying the meaning. He has also made but little reference to the extensive literature of skin affections. Very properly he has supposed that medical students and general practitioners are more interested in knowing what the author's views are upon a subject, as the result of his observation and experience, than to be told what this or that French or German savant has said. This is a practical age, and American physicians are exceedingly practical. They are especially anxious always to be made acquainted with the *facts* in regard to diseases and their mode of treatment.

That the student may have an intelligent understanding of the affections of the skin, Part I. is devoted to "General Considerations." These Considerations embrace the Anatomy and Physiology of the Skin; the Symptomatology of Skin Diseases; Their Diagnosis, Pathology, Etiology, Treatment, Prognosis. The author makes nine classes of the diseases of the skin. The *first class* consists of Disorders of

Secretion and Secretion; the *second*, Hyperemias; the *third*, Hemorrhages; the *fourth*, Exudations; the *fifth*, Hypertrophies; the *sixth*, Atrophies; the *seventh*, Tumors; the *eighth*, Neuroses; the *ninth*, Parasites—animal parasites, vegetable parasites. A number of valuable formulæ are to be found in the latter part of the work.

The work contains many illustrations and several very beautiful colored plates. Students and physicians will find it well adapted to their wants. A proper study of it will give them a very satisfactory knowledge of skin affections.

DOCTOR AND PATIENT. By S. Weir Mitchell, M.D., LL.D., Harv., Member of the United States National Academy of Sciences, President of the College of Physicians of Philadelphia, etc. Introductory. The Physician, Convalescence, Pain and Its Consequences, the Moral Management of Sick and Invalid Children, Nervousness and Its Influence on Character, Outdoor and Camp Life for Women. 12mo. Pp. 177. Philadelphia: J. B. Lippincott & Co. Cincinnati: R. Clarke & Co. Price $1.50, cloth.

The author of this little work, Dr. S. Weir Mitchell, our readers will recognize to be the well-known, eminent specialist in diseases of the nervous system, who has written several works upon those diseases, as "Lectures on Nervous Diseases," "Injuries of the Nerves and Their Consequences," and several others. Dr. Mitchell has not devoted his leisure hours to writing books upon medical subjects exclusively, but has written several novels and poetical works. Of his novels there is one entitled "In War Time;" another, "Hephzibah Guinness; Thee and You;" and "A Draft on the Bank of Spain," etc. It will thus be perceived that it is compatible for a most distinguished physician, one who is recognized to be learned in medical science, to indulge in what is termed light literature, and to take pleasure in cultivating the Muses. Virgil, the great Roman poet, whose poetry will last as long as time, was a physician.

Dr. Mitchell, in the introduction of the work, says that many times he has been asked if there was no book that helpfully dealt with some of the questions which a weak or nervous woman, or a woman who has been these, would like to have answered. He knew of none; and, although he

states he does not flatter himself that the present one is fully adequate to the purpose, yet he has put it forth, no doubt hoping that it will subserve a useful purpose. Few nervous persons, undoubtedly, are so happily constituted as to need from a physician neither counsel nor warnings; and it devolves upon him, in the great majority of instances, to afford it.

It does not follow that, because a physician is competent to treat diseases, he is competent to give, in all cases, a person the advice he needs after he has become convalescent from some malady of which he has cured him. Necessary counsel to those recovering is not limited to advice in regard to shunning the external causes of disease, but often it has to do with the moral nature of the individual, which many medical men know but little about, not being able to understand how any one can differ in character from themselves. We have seen physicians completely nonplused by the phenomena they witnessed in what are termed nervous persons, especially women.

The author says that when he wrote the essays contained in the work, he was tempted to call them lay sermons, so serious did some of the subjects seem to him; for they touch on matters involving certain of the most difficult problems in human life, and involve so much that goes to mar or make character. But as all of the chapters are not of this nature, he contented himself with a title which does not so clearly suggest the preacher.

We feel sure that, with very many of their patients who need counsel, physicians will rejoice that there is just such a work as this one to place in their hands. It will give the convalescent and nervous the advice they need, and it will relieve the medical attendant of much anxiety as regards the moral treatment that would be proper in many cases. "When you sit beside a woman you have saved from mournful years of feebleness, and set afoot to taste anew the joy of wholesome life," says Dr. Mitchell, "nothing seems easier than, with hope at your side, and a chorus of gratitude in the woman's soul, to show her how she has failed, and to make clear to her how she is to regain and preserve domination over her emotions; nor is it then less easy to point out how the moral failures which were the outcome of sickness, may be atoned for in the future, now that she has been taught to see their meaning, their evils for herself, and their sad influence on the lives of others."

But all are not so competent to discharge a duty of the kind as Dr. Mitchell, and, consequently, his book should be looked upon as a boon by many who can use it for the benefit of their patients, and obtain their gratitude.

THE NEW YORK MEDICAL JOURNAL, VISITING-LIST AND COMPLETE POCKET ACCOUNT-BOOK. Prepared by Charles H. Shears, A.M., M.D. New York: D. Appleton & Co. Price, $1.25.

THIS list is based upon an entirely new plan, the result of an effort to do away with the defective method of keeping accounts found in all visiting-lists hitherto published. Each page is arranged for the accounts of three patients, to the number of thirty-one visits each, which may have been made during a current month or may extend over a number of months, according to the frequency of the visits. By this means the necessity for writing a patient's name at each visit, or for searching through several closely written pages to ascertain how many visits have been made, is obviated. Arrangement is made for 375 accounts. With the simple system here inaugurated the practitioner can, at a glance and without the trouble of tracing the narrow columns found in the ordinary lists, ascertain the condition of the account of any patient; when, and how many visits have been made; what has been paid and what is still due.

It is provided with an index, and is, without doubt, the most perfect visiting-list ever offered to the profession, as it possesses all the advantages without the objectionable features found in all others. It can be commenced at any time.

Editorial.

DR. S. D. GROSS' AUTOBIOGRAPHY. — In the January number of the MEDICAL NEWS we reviewed this work at considerable length, quoting quite a number of interesting passages. In this issue we will continue our quotations in the way of copying his views in regard to a number of distinguished medical men. We will first quote what he says in regard to Dr. Reuben D. Mussey, who was for a long time regarded the leading surgeon of Cincinnati.

"He was born in Pelham, N. H., June 23, 1780. He

was educated in the Classics and Belles-Lettres at Dartmouth College, and graduated in medicine at the University of Pennsylvania in 1809. In 1837 he was called to the Chair of Surgery in the Medical College of Ohio.

"Some of his surgical exploits were of a brilliant and fearless character. One of these was a case in which, for the cure of an extensive nævus of the scalp, he tied both the primitive carotid arteries after an interval of only twelve days—followed by the excision of the morbid growth and the recovery of the patient. His operation for the removal of the scapula with a large portion of the clavicle, after previous amputation at the shoulder-joint, is, like the ligation of the carotids, classical. He lithotomized forty-nine times, with only four failures. He was also successful in herniotomy, and in subcutaneous ligations for the cure of varicocele.

"As an operator he was painfully slow. His hand, from some defect of the nervous system, was tremulous. [Exceedingly so, indeed, equaling the tremulousness in 'trembling paralysis.'—Ed. News.] In watching its movements one almost felt inclined to seize the knife, and either run away with it or do the cutting one's self. I shall never forget how long, on one occasion, when he was tying the femoral artery for the cure of a popliteal aneurism, his scalpel hovered over the site of the artery before it pierced the skin; and yet the operation was finally well performed. Notwithstanding this lack of dexterity, Dr. Mussey's success was far greater than that of many surgeons better skilled in the use of the knife."

Dr. Gross certainly *grossly* exaggerates Dr. Mussey's slowness in operating. We have witnessed his operations many times after he had become quite old, and, although it would be naturally expected that great age would lessen the rapidity of the movements of his hand, as well as the exceeding tremulousness of it, yet it never seemed to us that he operated any more slowly than the average careful surgeon. We have heard him mention that he had frequently amputated a thigh in three minutes from the time he seized his knife. We have seen him perform the most delicate and important operations upon the eye, and it seemed to us that he performed them rapidly and skillfully. It may be Prof. Gross was a more rapid operator, but we think that Mussey's movements were rapid enough for safety.

"Mussey was an avowed enemy of everything in the

form of stimulants in the practice of medicine, as well as in private life and in the social circle, and he omitted no opportunity strongly to inveigh against their use. The counterblast of King James against tobacco was not couched in more denunciatory language than the protest of the distinguished surgeon. Against the use of alcoholic drink he was more severe. He became at an early age a zealous lecturer upon intemperance, and took an active interest up to the last days of his life in the establishing of temperance societies. He was all his life a devout and consistent Christian, held morning and evening services in his family, and was a regular attendant upon church on the Sabbath, and also, when practicable, during week-days."

As stated by Dr. Gross, Dr. Mussey never tasted animal food. He believed that nature designed that man should live exclusively on a vegetable diet.

Dr. Gross thus speaks of the Medical College of Ohio, the Demonstratorship of which he filled, and in which he lectured upon Pathology; and of the Medical Department of the Cincinnati College:

"I remained in the Medical College of Ohio only two sessions. I did not like my situation. The Faculty was especially a weak one, composed, for the most part, of selfish, narrow-minded men, with moderate scientific attainments, and little ability as teachers. I could not forget the illiberal conduct which had sent me to the garret instead of affording me free access to the amphitheatre. The writer who had fired the squib in the *Gazette* knew his man; and although I had reason to believe that he had no wish to annoy me, he unwillingly did me a positive injury.

"In 1835 the Medical Department of the Cincinnati College was organized, with a Chair of Pathological Anatomy, to which I was unanimously appointed by the Trustees. My colleagues were Drs. Daniel Drake, the founder of the School, Joseph Nash McDowell, Landon C. Rives, John P. Harrison, Horatio G. Jameson and James B. Rogers, nearly all men of brains, energy and laudable ambition, with a full appreciation of their positions as professors in a new and rival institution. Jameson and Rogers were brought from Baltimore under a guarantee each of fifteen hundred dollars. At the end of the first session Jameson, having failed to give satisfaction, returned to Baltimore, and Dr. Willard Parker succeeded him in the Chair of Surgery.

"This school continued until 1839, when it was dis-

banded, Parker having accepted the Chair of Surgery in the College of Physicians and Surgeons of New York, and Drake that of Pathological Anatomy and Clinical Medicine in the Louisville Medical Institute, better known afterwards as the University of Louisville. The class during the last session of the College numbered 114, and the school was thus destined, if its career had not thus been unexpectedly arrested, soon to outstrip the Medical College of Ohio, as it had a far abler faculty."

Commencement Exercises of the Cincinnati College of Medicine and Surgery.—The Cincinnati College of Medicine and Surgery held its *Fifty-third Commencement* at Smith & Nixon's Hall, Monday evening, February 20th. The large room was crowded by the friends of the College and the graduates, to witness the exercises. Instead of an orchestra, the very distinguished pianist, Prof. L. E. Levassor, gave the audience some of the finest piano music we ever heard, and Mrs. Geo. C. Weimer sang some very beautiful solos. Piano music and the singing of solos, we know, are somewhat an innovation of the usual custom, which requires orchestral music; and some may think the dignity of the occasion would consequently be lessened by the substitution of any other kind; but when we consider that at a commencement the majority of those attending are in a very pleasant state of mind, amounting almost to rejoicing—the students, because they are about to receive the "titles, dignities and immunities of Doctors of Medicine," and become recognized members of a learned profession; their friends, who compose a large part of the audience, because those in whom they are greatly interested have reached the goal for which they have long been striving, and are about to enter upon a new epoch in their lives—surely, whatever tends best to give expression to the happy state of feelings of those present—graduates, parents, brothers, sisters, sweethearts, etc.—is the most appropriate. Dignity is not much in the mind of any one at such a time; but as all are cultivated, they naturally prefer to give expression to their jollity in some lively music that is beautiful, esthetic and chaste. But what music, in beauty, can excel the music of the piano and that of a cultivated human voice?

We have no hesitation, therefore, in stating that the music was indeed very fine as presented by Mrs. Weimer and Prof. Levassor.

The Rev. C. W. Ketcham made the invocation. Prof. R. C. S. Reed, the Dean, followed with a report upon the condition and prospects of the College, adding some very pertinent remarks. He showed how, through the conceit, egotism and ignorance of some of the Trustees of the Cincinnati Hospital, the educational facilities of Cincinnati had been impaired, students had been kept away from the city, and the prospects of making Cincinnati a great medical center, in consequence of its being a great central city, had been lessened. He also gave some attention to those physicians who, desiring to be regarded as leaders in the progressive march of medicine, were continually startling the community by announcing their "findings" with the microscope and test-tube, filling the people with alarm when they sat down to their tables to partake of food, or ventured to drink a glass of water, fearing that in the meat or vegetables eaten, or in the water drank, they might introduce into their bodies a stray animalculus, or hungry micrococcus, or a terrible bacillus, and, as a result, would get hydrophobia, measles, typhoid fever, or an attack of the piles. He assured the audience that he had, during the past summer, fall, and the present winter, drank the Ohio River water without having boiled it, notwithstanding the repeated warnings of progressive doctors, and, at no time, had had a single symptom of either hydrophobia, the mumps, or typhoid fever.

After Prof. Reed had concluded his remarks, the degree of M.D. was conferred upon the following gentlemen: Elmer E. Allenbaugh, H. Beatty, E. Everett Bennett, Francis W. Brown, Edward Day, John H. P. Dearmin, J. H. Fritts, E. E. Kirk, Frank S. Milbury, H. S. Pernot, J. S. Riddle, Leonard A. Robison, H. Somerville, George H. Winkelman, Julian W. Zinn.

After the conferring of the degrees, Rev. Dr. M. C. Lockwood, pastor of one of the Baptist churches of this city, addressed the graduating class and the audience. We have not much more space to spare than to say that the Rev. Doctor's remarks were very good indeed. He began his address by referring to that king of the Israelites who, being sick in his feet, and relying upon the physicians instead of God, *slept with his fathers*. He made many good points, and gave the graduating class much excellent advice. He told them that if a farmer, who kept near his house an open, offensive sewer, or possessed a cellar under his house filled with barrels of decaying fruits and vegetables, had a mem-

ber of his family lying dead in the house—a child perchance—and some one, to condole him, would ascribe his bereavement to a visitation by God for a good purpose, to assert emphatically that it was not true—that God did not thus send calamities upon his creatures—that his bereavement had been the result of his own gross violations of the laws of health through ignorance, being too intent on making money to inform himself in regard to them—that the death of his beloved child had been caused by the open sewer he had been keeping, and to the noxious gases permeating through his house in consequence of having had his cellar full of decaying vegetables—that God had nothing to do with his bereavement—he himself was to blame. He impressed upon the attention of the young doctors their responsibilities and the duty which devolved upon them to enlighten their clientage in regard to sanitation. He said that there was a close relationship existing between physicians and ministers of religion—that both were laboring for the same end—the improvement and elevation of humanity.

At the conclusion of Dr. Lockwood's excellent discourse, Prof. L. C. Carr, on the part of the Faculty, delivered the valedictory address to the graduating class. We presume it was good, but the gentleman spoke in such a low tone of voice, we could only now and then catch a sentence.

Some three prizes, in the form of medals, were distributed to members of the class.

As we witnessed the graduation of these young men, we could not help calling to mind the very many young men whom we have seen in times past stand up and receive their diplomas, who are now no more, having joined the number of the great majority, which number, all will eventually join and help to swell, for all are under sentence of death.

Official Circular.—The following official circular has been received from the Secretary of the American Medical Association:

Philadelphia, Pa.,
1400 Pine St., S. W. cor. Broad.

The Thirty-ninth Annual Session will be held in Cincinnati, Ohio, on Tuesday, Wednesday, Thursday and Friday, May 8, 9, 10 and 11, commencing on Tuesday, at 11 A.M.

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such

County and District Medical Societies *as are recognized by representation in their respective State Societies*, and from the Medical Department of the Army and Navy, and the Marine Hospital Service of the United States.

"Each State, County and District Medical Society entitled to representation, shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates from any particular State, Territory, county, city or town, shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Secretaries of medical societies, as above designated, are earnestly requested to forward, *at once*, lists of their delegates.

Also, that the Permanent Secretary may be enabled to erase from the roll the names of those who have forfeited their membership, the Secretaries *are, by special resolution*, requested to send to him, annually, a corrected list of the membership of their respective societies.

SECTIONS.

"The Chairman of each Section shall prepare an address on the recent advancements in the branches belonging to his Section, including such suggestions in regard to improvements in methods of work, and present, on the first day of its annual meeting, the same to the Section over which he presides. The reading of such address not to occupy more than forty minutes. * * * *"—*By-Laws.*

Practice of Medicine, Materia Medica and Physiology—Dr. (*)———, Chairman; Dr. N. S. Davis, Jr., 65 Randolph Street, Chicago, Ill., Secretary.

Obstetrics and Diseases of Women and Children—Dr. Eli Van De Warker, 45 Montgomery Street, Syracuse, N. Y., Chairman; Dr. E. W. Cushing, 1 Hotel Pelham, Boston, Mass., Secretary.

Surgery and Anatomy—Dr. Donald McLean, 72 Lafayette Avenue, Detroit, Mich., Chairman; Dr. B. A. Watson, 124 York Street, Jersey City, N. J., Secretary.

State Medicine—Dr. H. B. Baker, Lansing, Mich., Chairman; Dr. S. T. Armstrong, U. S. M. Hospital Service, Secretary.

* Vacant.

Ophthalmology, Otology and Laryngology—Dr. F. C. Hotz, 191 Clark Street, Chicago, Ill., Chairman; Dr. Edward Jackson, 215 South Seventeenth Street, Philadelphia, Pa., Secretary.

Diseases of Children—Dr. F. E. Waxham, 3449 Indiana Avenue, Chicago, Ill., Chairman; Dr. W. B. Lawrence, Batesville, Ark., Secretary.

Oral and Dental Surgery—Dr. J. Taft, Cincinnati, Ohio, Chairman; Dr. E. S. Talbot, 125 State Street, Chicago, Ill., Secretary.

Medical Jurisprudence—Dr. E. M. Reid, 243 North Fremont Street, Baltimore, Md., Chairman; Dr. C. B. Bell, Suffolk, Mass., Secretary.

Dermatology and Syphilography—Dr. L. D. Bulkley, 4 East Thirty-seventh Street, New York, Chairman; Dr. S. F. Dunlap, Danville, Ky., Secretary.

"A member desiring to read a paper before a Section should forward the paper, or its *title* and *length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements at least one month before the meeting."—*By-Laws.*

Committee of Arrangements—W. W. Dawson, Cincinnati, Ohio, Chairman.

WM. B. ATKINSON, M.D.,
Permanent Secretary.

THE GREAT CENTENNIAL EXPOSITION.—In the early part of July of the present year, about the fourth, Cincinnati will open a grand exposition in commemoration of its hundredth anniversary, to be called the Centennial Exposition. It will be the effort on the part of the citizens to make it one of the grandest exhibitions ever held in this country. For several months the Commissioners have been busy in erecting additional buildings to the very large regular Exposition buildings, in which the annual expositions have heretofore been held.

The contractors who have been having in charge the erection of the new, colossal buildings, we understand, are far ahead of time in their work. We learn that they will be ready to turn the buildings over to the Commissioners by the 1st of April. There will be in the additional buildings seven million square feet of space. If this immense space should be in one building—which it will not be, for there

will be quite a number of new buildings—it would be necessary that the building be thirty-five thousand feet long and two hundred feet wide. But besides these buildings there will be annexes of various kinds, which will largely increase the exhibition spaces.

At the present time there is a flood of applications for space from abroad—from leading cities of the South, East, North, West and Northwest. Many agents of European mercantile firms and factories have applied already for room. The exhibition may not be quite so great as the Centennial held in Philadelphia in '76; but whatever there will be wanting in quantity, an effort will be made to make up in quality.

We have not now time and space to enter into details in regard to what the Great Centennial of 1888 is expected to be—we will do that at a future time. We will assure our readers, however, that it will be a huge affair, in which will be found exhibitions in every department of industry, art and science, which will interest all intelligent persons—the scientist, the admirer of the useful and the admirer of the beautiful.

Decease of a Physician.—We are pained to announce the decease of George W. Monosmith, M.D., who died October 21, 1887.

Dr. Monosmith studied medicine at Huntington, Ohio, with Dr. Burtch of that place. After due preparation by reading with his preceptor, he entered the *Cincinnati College of Medicine and Surgery*, and after attendance upon two courses of lectures in that institution, he received his diploma—graduating with honors in 1876. He stood high in his class, as he was an intelligent, industrious student, who improved his opportunities.

He located at Kipton, Lorain County, Ohio, where he soon became a popular and successful practitioner of medicine. We understand that his practice was large, for his neighbors regarded him as a good physician, and felt that he was competent to treat their diseases. He married, of course, as every sensible physician will do who starts out to make the practice of medicine his life-work, for, with a helpmeet, he can better devote his energies to the relief of his fellow-men.

Accompanied by his wife, Dr. Monosmith attended the late meeting of the *International Medical Congress* at Wash-

ington. On returning from the Congress, we are informed that he was attacked with a catarrhal fever of a high grade. When apparently about to become convalescent, he suddenly died from the effects of some heart complication.

He has left a wife and son, who have, in their bereavement, the sympathy of all who know their loss. When a good man and a good physician dies, all mourn.

American Medical Association.—A meeting of the medical profession of Cincinnati was held at the Lincoln Club Building, since the last issue of the Medical News, for the purpose of arranging for the meeting of the American Medical Association, in Cincinnati, in May. Very many physicians were present, and the meeting was quite an enthusiastic one. Speeches were made by different gentlemen, and it seemed the purpose of every one present to do all in his power to make the coming meeting of the Association the grandest one ever held in this country. Liberal subscriptions of money were made. Without any outside aid, near $10,000 will be raised in the profession for the entertainment of delegates.

Arrangements are being made for very fine exhibits, by manufacturers of drugs, medical preparations, nutrients, surgical, medical and scientific instruments, as microscopes, lenses and instruments of precision generally. The local Committee of Arrangements are making the most generous preparation to give all necessary facilities to exhibitors, as well as toafford accommodations to those having them in charge. Many of the exhibits will remain for the Centennial Exposition.

A French Prize of $2,000 has been divided among four Paris physicians for essays upon the "Treatment of Strictures of the Urethra." The essays presented were of such equal merit that no one could be selected for the entire sum.

A Physician Convicted of Murder.—Dr. Philip Cross, a retired Surgeon-major, and a licentiate of the Royal College of Surgeons, Ireland, was recently convicted of the murder of his wife, by the administration of arsenic.

There were sixty foreign delegates to the International Medical Congress. Of these, seven were German, fourteen French, two Austrian and four Italian.

THE
CINCINNATI MEDICAL NEWS.

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Original Contributions.

Paralysis Agitans and Multiple Sclerosis.

A Clinical Lecture by Philip Zenner, A.M., M.D., Lecturer on Diseases of the Nervous System in the Medical College of Ohio.

GENTLEMEN:—The two patients before you present, in the main, the same manifestation tremor of the hands and arms, though they represent two quite distinct and different diseases—paralysis agitans and cerebro-spinal multiple sclerosis. The two diseases were for a long time confounded, and it is only within recent years that they have been distinguished from one another. I wish to point out to you, in the appearances of the two patients before you, how easily they may be distinguished when the characteristic conditions presented by each are known.

Firstly, observe the patients themselves. The one is a man fifty years of age, though he appears much older; the other is a young woman of twenty-five. The first has paralysis agitans, a disease rarely beginning before the age of fifty; the other has multiple sclerosis, which almost never begins after forty. Next observe the difference in the degree and kind of tremor. While their hands are resting you see no tremor in the case of multiple sclerosis, while it never ceases in the other. Now tell them to move their hands, and for a moment the tremor ceases in the old man, while it becomes quite marked in the young woman. It is usual in paralysis agitans that the tremor is to some extent controlled by any active movement of the trembling limb, while the tremor of multiple sclerosis is called "intention tremor," because it is absent during complete rest, and is

brought on by any intended movement, the tremor becoming more and more excessive as the voluntary movement is larger and accompanied by greater effort. You will observe in our patients that the tremor in the case of paralysis is very fine; that is, the excursions of the hand in each movement are very slight; while in the other case, especially if the patient attempts any considerable movement, the tremor is very large and sometimes almost violent. You will also note, if you observe carefully, that, in the case of paralysis agitans, the movements of the fingers are co-ordinated; the thumb constantly playing back and forth over the fingers, as though he were rolling pills or counting money. On the other hand, there is no appearance of co-ordination in the tremor of our other case. Such appearances are usually presented in these cases; that is, a fine tremor with appearance of co-ordinated movements in paralysis agitans, and large, coarse tremor, with no appearance of co-ordinated movements in multiple sclerosis.

I have now pointed out to you differences in these two cases which easily enable you to distinguish one from the other. In both of these cases the disease is still in its earlier stages. When fully developed there are other distinctive features of each disease, which further knowledge of their clinical histories would readily enable you to recognize.

Paralysis agitans usually begins with tremor in one extremity. It gradually increases in intensity, and spreads from one limb to another, until finally both upper and lower extremities are affected. The muscles of the head and neck are very rarely affected, and this, as we will see, is an important distinction between this disease and multiple sclerosis. There is another motor symptom which is even more characteristic than the tremor; that is, muscular rigidity. This is often present to a slight degree in the early periods of the disease, as can be seen in a certain amount of resistance experienced when passive movements are made. But at a later period the muscular rigidity is very marked, and is seen in the face, in the attitude and the gait of the patient. The features become stolid and expressionless. The whole body seems to be held in a rigidly fixed attitude, and, in fact, the patient makes any, even slight, movement slowly and with difficulty. The gait is very characteristic. The steps are small, the body bent forward. The patient often runs forward to save himself from falling.

Occasionally there is a tendency to run backward. That symptom is occasionally manifested in several cases of paralysis agitans who attend our dispensary. The symptoms just mentioned—stolid face, rigid attitude of body and peculiar gait—present a very characteristic picture.

These patients often suffer with cramps, sense of fatigue, or muscular tension, and very frequently have a sense of heat over a part or the entire body, which may or may not be accompanied by profuse perspiration.

The disease is a very protracted one. In itself it rarely leads to a fatal termination. Sometimes, on account of muscular rigidity, the patient is altogether confined to his bed or chair, and paralysis, atrophy, bed-sores, or the like, may hasten the end.

Multiple sclerosis can not be so easily described. It sometimes presents no symptoms, at other times presents the most variable clinical pictures; in fact, may simulate almost every functional or organic disease of the nervous system. A distinguished French neurologist relates a very interesting anecdote in this relation. An eminent physician, who had not yet heard of this disease, visiting a hospital, had a case of this kind pointed out to him. When he saw the patient rise from his bed, he remarked, "That is a case of ataxia." "Perhaps," said his colleague, "but what do you think of the rhythmical movements of his head and limbs?" "Oh! I see. It is a case of some kind of chorea or paralysis agitans." The patient was then interrogated, and he answered with a very peculiar manner of articulation, his voice very monotonous, and each syllable brought out very slowly, his lips trembling at the same time. "I understand," said the visitor, "you wished to embarrass me by presenting a very complex case. He also has the symptoms of progressive paralysis. We need go no further. Your patient has, in his own person, all the diseases of the nervous system."

I will attempt to give you very briefly the most common clinical manifestations of this disease. One of the most characteristic symptoms—the tremor—you have already seen. The tremor is rhythmical, and, as before mentioned, is absent when the muscles are altogether at rest. In the beginning the tremor may be limited to a small part of the body, as one hand, but as the disease advances, all the muscles of the body become involved, those of the head and neck, as well as of the trunk and extremities. The tremor may

become so violent that the patient is unable to walk, or even to stand, and may not be able to feed himself. Though a very common symptom, tremor is not always present. It seems to be only present when there are areas of disease in the medulla oblongata and pons varolii. But of this we will speak more particularly in connection with the morbid anatomy of the disease.

Tremor is usually not the first symptom of multiple sclerosis. Generally the disease begins with slight paralysis of the lower extremities. In the beginning this is usually very slight, so that the patient merely observes that walking is a little more difficult than formerly, that he tires easily, or that the feet drag in walking. Gradually the gait gets worse, the limbs become stiff, there is a great deal of trembling of the lower extremities, especially during the act of walking, and the latter finally becomes impossible. The limbs now become stiff, even in bed, and they are often held in contracted positions, the knees flexed strongly, the thighs pressed against one another, and the feet in the position of talipes equinus. The tendon reflexes are generally exaggerated from the beginning, the patellar tendon reflex very much in excess, and the ankle clenus easily elicited. The motor symptom just described may at a later period be manifested in the upper extremities, though, usually, to a less degree. These symptoms are due to the presence of areas of disease in the spinal cord.

Other spinal symptoms are sometimes manifested, symptoms like those of locomotor ataxia, of polomyelitis, etc., but we will not have time to speak of them now. We must next consider the cerebral symptoms; that is, the symptoms produced by areas of disease in the brain.

One of the most striking of the cerebral symptoms is the peculiarity of speech. The voice is very monotonous, and the words are uttered very slowly, each syllable being pronounced separately, the whole very much resembling the scanning of verse, and therefore termed scanning speech. Another important symptom is nystagmus, a constant lateral or up and down movement of the eyes. Both the scanning speech and nystagmus are valuable symptoms in diagnosis, because they are very frequently present. There may be other symptoms on the part of the eyes. Sometimes we find what is termed spinal myosis; that is, the pupils are quite small, do not respond to light—that is, do not become larger in a dark room, or smaller when a light

is thrown into them, but contract during the act of accommodation—that is, when looking at a near object. There is sometimes amblyopia, or impaired vision, and, in such instances, an examination with the ophthalmoscope reveals some atrophy of the optic nerve.

In very many cases attacks of an epileptic or apoplectiform character take place. Occasionally such an attack ushers in a disease; on the other hand, it may be the immediate cause of the fatal termination. But most commonly such attacks occur after the disease has existed for some time. There may be only one or very few such paroxysms, or quite a number may appear during the course of the disease. In the apoplectiform attacks there is a sudden loss of consciousness, the limbs lie flaccid and motionless, there is a flushed face and considerable elevation of temperature. When consciousness returns, a hemiplegia or paralysis of one-half of the body is observed. As a rule, all these symptoms disappear in a very few days; but, nevertheless, an attack of this kind usually leaves the patient in a permanently worse condition than before its occurrence.

Headache and vertigo are very common symptoms, in fact, are rarely absent, and there are besides, in some cases, symptoms of mental disturbance. The most common of these are changes of disposition, mental irritability, etc., but in some instances there is a slight degree of dementia, and in others, well-marked forms of insanity.

I have now mentioned the most common symptoms of this disease; have mentioned enough to give you rather a confused idea of the disease, though many other symptoms, not mentioned, are occasionally found. I wish you to particularly remember, because they are the most characteristic symptoms, the paralysis and rigidity of muscles, and exaggerated tendon reflexes, intention tremor, nystagmus, scanning speech and apoplectiform attacks.

The course of the disease is usually a very chronic one. It may last six, eight, ten, or even twenty years. Its course is usually very slowly, from bad to worse, sometimes there is improvement of indefinite duration. The fatal termination may be brought on by an apoplectiform attack, or as the result of cystitis, decubitus, or the like, but more frequently it is due to an intercurrent disease.

We must defer the consideration of the morbid anatomy and treatment of paralysis agitans and multiple sclerosis to a future lecture.

Baltimore Academy of Medicine.

STATED MEETING, HELD FEBRUARY 7, 1888.

Reported for the CINCINNATI MEDICAL NEWS.

THE President, W. C. Van Bibber, M.D., in the chair.

DISCUSSION OF DR. HIRAM WOODS' PAPER.

In referring to Dr. Hiram Woods' paper, read at the last meeting, Dr. J. J. Chisolm said, that in all the advances of ophthalmic surgery, very little has been done in the direction of the cure of detachment of the retina. In text-books the category of remedies is recited with the hope that some good might come from their use. In very recent cases profuse sweating with pilocarpin might induce the rapid absorption of the effused fluid and permit the retina to resume its normal position. Tapping the eye and withdrawing the liquid contents of the detachment might effect the same, but neither sweating, tapping, rest nor any known medication, brings about many cures. Blindness, sooner or later, is the unfortunate lot of persons suffering from a detachment of the retina, even when amelioration seemed to follow upon a prescribed treatment. Something may be done in the direction of prevention in those cases which develop from myopia. While injuries, tumors, hemorrhages and intra-ocular inflammations may bring detachment of the retina, it is well known that near-sightedness is its most fruitful cause, and that this eye trouble is decidedly on the increase. Not only is it propagated by hereditary transmissions, for near-sighted parents have usually near-sighted offspring, but I find from daily observation that numbers of children are becoming myopic whose parents have strong eyes. These myopic conditions are acquisitions brought about by faults in school-life, overworking young, growing eyes by too close and long-continued study, with bad surroundings. It is becoming a very serious question in our domestic economy, whether the extra knowledge which children acquire in their early life by forced schooling, compensates for the various bodily troubles which this forcing engenders. Near-sightedness is very seldom acquired after puberty. When the eye is matured, it seldom yields to internal congestions, however long kept up. A sewing-girl will apply herself to fine needle-work, for twelve to sixteen hours a day, by the month or year, and continue it

for a lifetime without inducing near-sightedness. Young, growing eyes can not stand this pressure without a yielding of the walls and a change of shape of the eye-ball by elongation. Eye work is called by the world nerve work. We know it to be muscular work. When the eyes are applied for one hour in study, it is as hard muscular work for the eyes as if the muscles of the arms had been at forced labor for a similar period. State laws prohibit children from working in factories. The law is a good one and should be applied to all factories—those for making cloth and those for acquiring knowledge—the schools being often the worse factories of the list. Little children are confined at hard work in the school from 9 A.M. to 2 P.M.—five hours—then, after a hasty dinner, they are sent to study till bedtime, ten and twelve hours a day being the amount of eye muscle work often demanded of children under twelve years of age. As it is usually during this early day of schooling that most of the myopic eye troubles originate, an excellent law might be framed prohibiting little children from studying at home, and requiring all school-books to be left in the school desks. This will give these little people a chance to lay in a good stock of health by open-air exercise in the afternoon, and the privilege of going early to bed. It is the very best prophylaxis against the acquisition of myopia. When near-sightedness has been acquired, the careful adjustment of concave glasses will do much, in connection with eye rest, to mitigate the annoyances and dangers pertaining to progressive myopia.

The President, Dr. W. C. Van Bibber, asked Dr. Chisolm if myopes got a less degree of myopia as they grew older. He recalled several cases in which old ladies who had been near-sighted when young, could read small print when older.

Dr. J. J. Chisolm replied that myopia once acquired is never outgrown. Myopia necessitates a change in the form of the eye-ball, an elongation of its antero-posterior diameter. Once elongated, it never shrinks back again. Its tendency is to increase, although there might be an arrest in the elongating process. Small degrees of this elongation, the mild degrees of myopia, are corrected by the progressive flattening of the lens in advancing age, or by progressive presbyopia. In the higher degrees of myopia no amount of lens flattening can correct the fault. Reading at a near

point without glasses may be enjoyed, but always at the expense of distant vision.

The President, Dr. W. C. Van Bibber, said that many parents did not allow their children to study at home because they thought that all work should be done at school. Too much close work over badly printed books injured a child's eyes at a period when they were not formed.

Dr. C. C. Bombaugh spoke of the lace-workers of Brussels who did work very trying to the eyes, and yet grew to old age without evidences of myopia or other injury to the eye.

Dr. J. J. Chisolm replied that myopia was rarely acquired after twenty.

Dr. Hiram Woods, in concluding the discussion, stated that he did not mean to say that concave glasses did harm *when* they enabled the patient to hold the print at a greater distance from the eyes than he held it without glasses. What he wished to emphasize was, that they *must do this* to make their use justifiable. There are cases of myopia where we can bring about *some improvement* in distant vision with *strong concave glasses*, and yet we can not raise their vision to the *normal* standard. Such cases of diminished visual acuteness usually have weak accommodation. If we look into most of the text-books usually found in the hands of students, we find certain proportions stated as existing between the glass needed for the best distant vision and the one required for near work. These proportions are very well for cases with *normal acuteness* of vision, but they should apply *only* to these cases. Often we find myopes wearing glasses for near work which are *proportionately correct*, and yet they receive little or no benefit as regards the distance at which their near work is held. Diminished acuteness of vision and lessened range of accommodation keep the patient from getting advantage from the glasses. In such cases the concave glass only puts an additional burden on the already weak accommodation. Last spring Dr. Woods saw a little girl eight years old with a high degree of congenital myopia. She was brought to him on account of the pain near work caused her. She had read most of the standard novels and was in the third class of the primary school. She read or studied all the time. She had $\frac{6}{200}$ distant vision and got $\frac{15}{200}$ by—12 Diop. Sp. She read Sn. No. 1, at three inches. 8 or 10 D. S. enabled her to read it at $4\frac{1}{2}$, and this was all the improvement possible. Now *any glass* for near work

here would only cause an extra strain on the accommodation, for the diminished acuteness of vision prevents her seeing at a greater distance and under a smaller visual angle. The treatment was to forbid absolutely near work for the next few years. This puts a stop to school-life, but it probably keeps her from going blind.

FIBROID TUMOR AND ELECTROLYSIS.

Dr. Wm. Pawson Chunn then related the case of a woman, twenty-six years old, who had a fibroid tumor. She had much pain and could not earn her living. She had been in the hands of another physician in the country, and he had diagnosed a tumor. He advised her to have the ovaries removed, and he did remove one and not the other. When she came to Dr. Chunn he found that since the removal of one ovary, the tumor was growing very rapidly, and he hesitated to operate, in order to remove the other ovary, when he did not know whether such an operation would be possible or not. He thought, as one physician had attempted its removal without success, it must be difficult to remove, and as he had, in a similar case, in an attempt to remove both ovaries, been compelled to take out the uterus also, he hesitated in this case. He advised the use of electricity according to the method of Apostoli, but the patient was not rich enough to allow of such an operation, and as he did not care to do a second abdominal section under the circumstances, he dismissed her.

DISCUSSION.

Dr. T. A. Ashby said: When the ovaries were removed to induce an artificial menopause, it was essential that no ovarian tissue be left behind. It has been shown that the smallest amount of ovarian stroma remaining after oöphorectomy, was sufficient to keep up the menstrual flow. The hemorrhage from fibroid tumors would continue under the influence of one ovary, or a piece of ovarian tissue, just the same as prior to operation. In a limited number of cases where oöphorectomy had been undertaken in cases of fibroid tumors, the operation became a practical failure, owing to an inability to find and remove the ovaries. In such cases hysterectomy has been recommended, as offering the best results. This operation Dr. Ashby thought contra-indicated, since Apostoli has perfected a method of dealing with fibroids by electricity. The electrical treatment of

these cases was becoming extremely satisfactory in the hands of a number of operators, and it seems to offer a promise of superseding oöphorectomy and hysterectomy in the vast majority of these cases of fibroid growths.

The chief advantage of the Apostoli method was obtained by the use of high currents administered in exact dosage. Apostoli begins with a low current of 20 to 30 milliampères, and increases gradually up to 200 to 250 milliampères. Patients are enabled to tolerate these high currents by the use of a wet clay electrode applied over the abdomen, which diffuses the strength of the current at this point of application, whilst the pole introduced into the tumor or uterine cavity transmitted the full strength of the current to the tumor, and therein produced the electrolytic or hæmostatic action, according to the pole used. The negative pole is cauterizing in its action and is passed into the substance of the tumor; the positive is constringing, hæmostatic and alterative in its effects, and is introduced into the uterine cavity. The negative pole is to be used where the tumor is to be removed; the positive in those cases where hemorrhage is the offending symptom. Dr. Ashby said in cases of bleeding fibroids the amount of blood lost bore no relation to the size of the tumor. He had observed in these cases that the entire endometrium was more or less involved, and that hemorrhage was often controlled by curretting the entire uterine cavity. The curette will frequently remove vegetations and the hypertrophied mucous membrane, and hemorrhage will cease quite satisfactorily for a few moments. The procedure is not curative, but palliative. He has had good results from this method of treating these cases. Electricity most probably acts in the same manner.

Dr. J. J. Chisolm said he had used electricity frequently in tumors of the face. He put the negative pole in the tumor.

Dr. F. T. Miles said he had never seen a current as strong as that used in medicine. He thought it ordinarily made little difference where the indifferent pole was placed, but in the case of such strong currents thought the brain might be affected.

Dr. B. B. Browne said that he had been using electrolysis with very satisfactory results in the treatment of fibroid tumors and pelvic exudations. He thought that better results were obtained by inserting both needles into the tumor, than by applying one electrode over the abdomen.

He also thought that a strong current, applied for forty-five minutes under an anæsthetic, gave better results than the shorter and more frequent applications as used by Apostoli. Dr. Browne referred to his paper recently published in the *Maryland Medical Journal* (January 7, 1888).

Dr. F. T. Miles also thought that better effect was produced by putting poles in the tumor.

Dr. T. A. Ashby said when Apostoli first brought forward his method, he had shared the same skepticism expressed by Drs. Browne and Miles, in regard to his ability to employ currents of the high strength indicated. Whatever doubts he may have held in the past, have been expelled by the facts which Apostoli has produced, and by the further testimony of such men as the elder Keith, Sir Spencer Wells, Woodham Webb, Martin, of Chicago, and others. Dr. Thos. Keith, of Edinburgh, whose reputation for honesty and candor can not be impeached, has said that he accepted the Apostoli method in all of its details as fully up to all that Apostoli has claimed for it. With a record of four per cent. mortality in hysterectomy, Dr. Keith has boldly stated that he would consider it criminal practice to subject a patient to a hysterectomy until after the Apostoli method had been fully and carefully tried. With such authorities back of his work, Apostoli can quietly wait for a general recognition of his methods of dealing with fibroid growth.

AN OBSCURE CASE OF TABES DORSALIS.

Dr. F. T. Miles had seen a remarkable case in the last few days. The patient, a man thirty-five years old, came to him with optic neuritis in both eyes. He was nearly blind, and it was supposed that he had some brain trouble. He could find no history of any symptom that related to his brain, nor pain, nor dizziness, nor nausea, vertigo, nor loss of speech. He was at a loss. He tried the knee jerk, and found it absolutely wanting in one leg. He said he has had pain in that leg, but it was of a quick, sudden character not following any nerve course. It was a case of tabes dorsalis or locomotor ataxia, showing itself in one leg. Gowers had seen one such case. The patient could walk pretty well, but on standing with closed eyes he was unsteady, although blind, and this was very curious. There should be more trouble. The lesion probably lies high up in the spinal cord. Locomotor ataxia came on after the

eye trouble in this case; often the eye trouble does not appear for years after the ataxia trouble. Many of such cases have syphilis.

Dr. J. J. Chisolm said some eye cases were specific, such as interstitial corneitis; teeth were often notched in these conditions. Sometimes the teeth are notched when no evidences of syphilis are present.

Dr. A. K. Bond suggested that syphilis might skip a generation.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

NERVOUS APOPLEXY.—BY DR. BONSHUT.

This is called to-day hysterical apoplexy. For what reason? No one knows, but at present it is the fashion to designate as hysterical every nervous manifestation not due to material lesion, whether the same occur in woman or man, in the child or in the old. This qualifying adjective so deviated from its signification, is not for the purpose of throwing more light upon medical language, which is becoming every day more confused and more strange. Let us admit hysterical apoplexy in hysterical women, nothing better than that, but it is altogether another matter with those suffering from lead poisoning, from mercurialization, from alcoholic poisoning, from miasmatic infection, with the syphilitic, and if we observe nervous apoplexies in these, it is certainly the height of temerity to qualify them as hysterical. This is a negation of science.

However this may be, Dr. Achard, who adopts this view, has written an excellent thesis upon hysterical apoplexy, or as we call it, nervous apoplexy, and therein set forth the symptoms of this affection in a most graphic manner. We may never agree upon the terms, but a clinical observation well made, will be understood by every physician versed in these matters.

Hysterical apoplexy presents itself to us clinically, with all the characteristics of an apoplexy due to cerebral lesions. Now it is the grand attack, with loss of consciousness for three days or twelve hours, or at least for several hours; now it is an attack in its mildest form, consisting in dizziness, followed by a fall and sudden hemiplegia, without

loss of consciousness; finally the patient may find himself paralyzed on coming to.

As in organic apoplexies the attack is, in certain cases, preceded by prodroma, headache, malaise, curious sensations, etc. The attack may develop in two ways; first a dizziness, followed by a fall, then a complete loss of consciousness. Finally, like all hysterical attacks, it may supervene upon some strong emotion, or at a certain period, as at the period of menstruation.

The coma of this form of apoplexy is accompanied by the same state of muscular resolution as in the form due to encephalic lesions, and this general resolution has great similarity to the veritable paralysis which the hemiplegic limbs present. There has been observed deviation of the eyes from the side opposite to that of the paralysis. In other cases the limbs on the side opposite to the hemiplegia were found contracted. Sometimes there is retention of urine. The temperature is normal, likewise the pulse. The respiration is not stertorous, but it is sometimes intermittent and irregular, being sometimes ten less in one attack, and only three less in another. Finally, the face is never puffed up and congested; it bears the expression of tranquil sleep, rather than of stupor.

We may find in consequence of an aplopectic attack in hysteria, all the motor and sensitive disturbances which are usually consequent upon organic apoplexies. Thus we find almost constantly in the histories of such observations, hemiplegia and hemi-anæsthesia. It is true that the hemi-anæsthesia is here the principal accident, predominating more than the paralysis. It is this symptom which possesses the greatest diagnostic value. Now it is incomplete, partial; and again it is absolutely complete and realizes the type of cerebral hemi-anæsthesia, commonly observed in hysteria, and exceptionally only in cases of encephalic lesion.

As to the hemiplegia which always accompanies, so to speak, the hemi-anæthesia, it is frequently not well pronounced; it is rather a simple paresis.

Do we find consequent upon these hysterical apoplexies motor hemiplegias without hemi-anæsthesia? It might be possible, since by suggestion we can produce a hemiplegia with conservation of the sensibility. However, this would certainly be a very exceptional occurrence. It is true that two observations, of rather old date, speak of a motor hemiplegia only, but it is doubtful whether in these two instances

the sensibility was examined; at least no mention of its condition is made.

The facial paralysis in hysterical hemiplegia is denied by some observers and admitted by others.

When hemiplegia is on the right side, we observe simultaneously an aphasia, at least a temporary one, then partial contracture or choreiform trembling.

The absence of lesions in these apoplexies has been established by some rare autopsies, but the absence of lesions is still more clearly proven by the curability of these accidents by the esthesiogenic agents. This action of the esthesiogenic group of agents establishes the most intimate relation between all the nervous apoplexies, and it pertains more properly to pure hysteria. This curability by the esthesiogenic agents of all the consequences of the attack: hemiplegia, hemi-anæsthesia, hemichorea, contracture, clearly demonstrates that all these phenomena are most closely related one to the other, and that they are all of the same nature.—*Paris Medical, L'Union Medicale de Canada.*

INFANTILE CIRRHOSIS.

Cirrhosis has been considered by authors as a disease occurring only very exceptionally in infants. Lately, however, Drs. Larue and Honorat have shown in an article recently published in the *Revue des Maladies de l'enfance*, that this rarity is more apparent than real. These authors have been able to easily collect fifty-one observations, of which five are to them personal, made in a comparatively short period of time.

From these facts an important etiological lesson is learned; namely, that there exist cirrhoses that are absolutely in no way due to the influences of either syphilis or alcohol. Among the causes producing these forms of cirrhosis, the infectious fevers (eruptive fevers, scarlatina, variola, diphtheria) seem to play a most important part. M. Larue has made an especial study from this point of view of measles, in which he has frequently discovered hepatic changes. Tuberculosis is also a well-established cause of cirrhosis; finally, alcohol is the cause least disputed; as to syphilis, its influence seems to have been exaggerated. Among the most rare causes there may be mentioned inflammation of the duodenum, burns of the abdomen, and finally, the influence of cold and of traumatism.

The symptomatology of infantile cirrhosis differs but little from that of the adult; the symptoms at the outset confound themselves with those of hepatic congestion; various digestive troubles, alternate diarrhœa and constipation; vague abdominal pains, increased by pressure; enlargement of the volume of the liver with slight ascites; dilatation of the subcutaneous veins; icteric or subicteric color of the face; these are the initial symptoms which at first attract our attention. The special feactures in this symptomatology are the icterus at the outset, which is generally transitory, then the enlargement of the liver, soon followed by a diminution. At a more advanced period there appear general œdema, dyspnœa, diarrhœa; in one word, the symptoms of a confirmed cachexia, to which the patient succumbs if he is not carried off before by an intercurrent malady.

From a diagnostic point of view, it is tubercular-peritonitis, which is most easily confounded with infantile cirrhosis. Of all the classic differential signs, Dr. Larue attaches the greatest importance to the icterus of the outset; he insists also upon the appearance of relative health and the good mien which the infants preserve up to a relatively advanced period of their disease.

From an anatomical point of view, the histological lesion most commonly observed is of the type of fatty hypertrophic cirrhosis of sabourin, with the sole difference that microscopically the volume of the liver is diminished.

As in cirrhosis in general, treatment has but a mediocre influence on the progress of the malady; it is principally to prophylaxis that we must address ourselves, to avoid in infants the too prolonged use of spirituous drinks for a therapeutic purpose, both in the course of the infectious maladies as in their decline; to study with great care and to combat at the opportune moment all the abnormal symptoms of which the liver may be the point of origin.—*Abeille Medicale, L' Union Medicale de Canada.*

INSTANTANEOUS CURE OF WHOOPING-COUGH.

The treatment of this affection, as recently published by a Norwegian physician, is a matter of decided interest in that it appears to be of extraordinary efficacy, and that it seems to demonstrate the parasitic origin of the group of symptoms to which the name of whooping-cough has been given.

"It is now about six years," says Dr. Mohn, "that I had

my oldest son, then three years old, sick with scarlatina and whooping-cough." The cough began about eight days after the scarlatinous eruption, which was of mild form; the child was not confined to bed more than two or three days; the cough also was not very serious. At the end of six weeks, that is five weeks after the beginning of the whooping-cough, the apartments and the furniture were disinfected by means of sulphur fumigations. Several hours before the disinfection he had had a rather violent fit of coughing; for this reason Dr. Mohn somewhat hesitated about using sulphur. He, nevertheless, decided for the vapor of sulphurous acid, and the result was, that the child suffering with the whooping-cough was *instantaneously cured*, and that his sister, who was somewhat older, and who still had paroxyms of coughing, consequent upon the whooping-cough, was also immediately freed from her cough.

Four years later Dr. Mohn had a daughter, aged three years, attacked with a very severe form of whooping-cough. Three brothers and sisters were attacked at the same time, but their symptoms were in no way so serious; the little girl had also bronchitis, and the bleedings from the nose had greatly weakened her. He feared the issue in this case.

Every form of internal medication had been tried, also inhalations of chloroform and of carbolic acid, but without any result.

He now remembered how rapidly the sulphurous fumigations had acted on his older son; he burnt some sulphur, and on the following night the child had but two very slight paroxysms; the next day the cough had entirely disappeared. The other children were also immediately cured by the fumigations.

Dr. Mohn cites other cases:

A little girl, aged five months, suffering with the whooping-cough since five weeks, and a boy of four years, coughing since fifteen days, were cured as if by magic, by a sulphurous fumigation.

An infant of three months, suffering with the disease since five weeks, and three brothers and sisters coughing subsequent to a whooping-cough, are all instantaneously cured after a fumigation of sulphurus acid.

An infant of one year, suffering with the convulsive cough since a month, is likewise instantly cured after a disinfection with sulphurous acid.

This is the mode of procedure:

In the morning the children are dressed in fresh linen and taken away elsewhere. In the bed-room and in the chamber where the patients remain throughout the day, the bedding, the clothes, the playthings, and everything that can not be washed, is hung us. Then sulphur is burnt in the apartments in the quantity of twenty-five grammes for every cubic meter of space, and the sulphurous acid gas is allowed to act for five hours. Then all the things, clothing, bedding, etc., are exposed to the air; the apartments are freely ventilated, and in the evening the child lies in a perfectly disinfected room and bed . . . and the child is cured of its whooping-cough.

This method of treatment is certainly very simple and readily employed, and is certainly destined to render great service in those obstinate forms of whooping-cough that resist all other treatment.

At the Medical Society of Christiana, to which Dr. Mohn communicated the above facts, Dr. Schoenberg expressed the opinion that the sulphurous acid acts by freeing the air, the bedding, the clothes, etc., of pathological spores, and that it did so much better than a change of air, the aeration of the room and of the furniture; this old measure, which has certainly had a great measure of success.—*Nice Medical, L' Union Medicale de Canada.*

Selections.

Antiseptic Methods in Midwifery.

BY FAYETTE DUNLAP, A.M., M.D., DANVILLE, KY.

Read to the Boyle County Medical Society, December 28, 1887.

Mr. President and Gentlemen:—I undertake the presentation of this question with some degree of diffidence, so deeply am I impressed with its significance and a knowledge of the fact that in the brief time accorded me I will be unable to deal with it in a manner commensurate with its importance.

It can be safely said that the methods presently to be described, or some modifications of the general principle on which they are based, have taken a stronger position in

modern medical science than any of the improvements in the collateral branches.

The methods are so simple that their application is readily intelligible, and the principles underlying them so rational that, when once explained, they impress themselves upon us as an intuition. As prefatory to what will soon follow, a brief resume of the history of the unfolding of the germ theory of disease, and its application to the treatment of wounds, will be necessary and I hope interesting.

The belief that atmospheric air contained myriads of organisms capable of indefinite multiplication is centuries old, but it remained for the acute observation and brilliant genius of Louis Pasteur to actually demonstrate the truth of this conception. By a series of ingenious experiments it was proven that decomposition instantaneously began with exposure of animal extracts to atmospheric air. If the air was excluded or rendered sterile by passage through heated chambers, or certain chemicals, these fluids remained pure indefinitely. It then followed, as a logical sequence, that a solution of continuity of an animal surface furnished a culture bed for development of these organisms, and that their presence and activity were of necessity harmful. This knowledge having reached this point in its development, the philosophical mind of Joseph Lister, an Edinboro surgeon, grasped the idea at once and set about devising a method of purifying every wound, either accidental or intentional, that came under his care. The blood and tissues of human body invited the presence of this atmospheric life, and furnished them a suitable home wherein to dwell and multiply.

To exclude atmospheric air was impossible, but to free the wound of this active, poisonous life, seemed to offer some hope. What followed is familiar to every one present and need not be recounted here; and out of it has grown a principle which with this application forms the greatest advance in surgery since the discovery of anæthesia.

Viewing, then, every labor as a traumatisim, we can see wherein this principle of Listerism can find a fluid for its utilization. The placental site is an open wound, and the mucus and cutaneous surfaces of the parturient canal are subject to lacerations during labor and furnish a suitable habitat for their microscopical life.

All atmosphere free from their germ life exists only in theory, and an attempt at complete asepsis is chimerical.

There is, then, left open to us another point of attack, and what has been accomplished and what it promises for the future is the object of this paper.

A great many views of the nature of puerperal fever have been held at different epochs in the history of medicine. Hippocrates, Gulen, Sydenham and Smellie believed it was dead to suppression of the lachia. Later on the opinion became general throughout the world, that it was in some way caused by milk metastasis; this in turn gave way to the localist's theory that it was metritis, peritinitis, phlebitis, and was in some way the result of the puerperal state.

This was followed by the theory so ably defended even at the present day by Fordyce Barker, namely, that it is a specific essential fever belonging to that class of zymotic diseases. During the past decade the view has gradually gained ground that it is blood poisoning, or septicæmia, due to causes acting mainly from without and associated directly or indirectly with micro-organisms. This is the accepted view of to-day, and it is interesting to note the circumstances that have led to the adoption of this doctrine.

In 1847 Sewelmeiss began teaching the modern view of the causation of child-bed fever, and held that puerperal patients were chiefly attacked with puerperal fever when they had been examined by physicians fresh from contact with poisons engendered by cadaveric decay; that fewer ensued in the practice of those who after *post-mortem* examinations washed their hands in the usual manner; whereas but few, if any, cases occurred when the accoucheur had washed his hands in a solution of chloride of lime.

Thus thirty years prior to Pasteur and Seiter, was antiseptic midwifery being practically carried out, though in a crude way, not as application of a principle, but as the result of the close scrutiny of facts as seen by an acute observer. In 1850, Sir James Simpson, with extraordinary genius and foresight, wrote a paper on the "Analogy between Puerperal and Surgical Fever," in which he compared the uterus, after delivery, to an amputated stump.

The opinion held by Barker and his followers held a foremost place for many years, and was chiefly cultivated by those indorsing that enunciated by Simpson.

The discoveries of Pasteur turned the balance largely in favor of the septicæmia view, and, as above stated, is almost universally accepted to-day.

Another strong point in its favor was the appeal to mor-

bid appearances and the similarity of the lesions of surgical septicæmia and puerperal fever.

This position is further reinforced by the discovery of micro-organisms in the puerperal uterus identical with those in septicæmia. These organisms, like those found in erysipelas and in decomposing animal tissues, are antagonized by certain chemical agencies, and as a result of this knowledge of such an antagonism, the application of safe means for the destruction of them. The promise has been completely fulfilled in the brilliant results obtained in maternities by the routine use of antiseptics.

A study of the mortality tables, before and after the introduction of the antiseptics, furnishes convincing evidence of their value. There can be no other reason for this gratifying improvement, as a rigid use of the antiseptic method is the only change made in the management of puerperal in these maternities.

I have not the time to devote to the investigation of these statistics, but it is incontestably demonstrated that this diminished death-rate is due alone to this principle of antisepsis.

Prior to its introduction the mortality in five Continental and three English maternities, was something over 4.2 per cent. for ten years, including two or three epidemics in the Sywig-In-Volumeta, in Munich. The same institutions now give the astounding record of only one-third of one per cent.

The methods vary in the different maternities, and in the wards of different attendants in the same hospitals, yet all have in mind one grand principle, cleanliness first—that is, as near approach as possible to an aseptic condition—and this supplemented by antiseptics.

It is now admitted that normal labor is a traumatisim. Every case furnishes an opportunity for the entrance of these micro-organisms into the blood current, and when once lodged there they can not be expelled.

It is further admitted that this antagonism between these bacilli and their spores, and certain chemical agencies, places a weapon in our hands with which we may protect the avenues through which they enter.

The principle being so simple, and its application still more so, the question now arises whether it is not our duty, with these facts before us, to bring it into requisition in our midwifery practice. Some will claim, that cleanliness, which they habitually enjoin and practice, is a sufficient protection.

I will aver that it is not; and while it is absolutely necessary, it in no wise insures such protection as scrupulous cleanliness, supplemented by a rigid adhere to antiseptic rules.

In no department of science is any principle more firmly established than this one. It is no fashion, but fixed principle, and though it may be greatly modified and, certainly, simplified in the range of its application, medicine, surgery and midwifery will make its further progress directly in this line of reasoning.

From the results thus secured by the employment of antiseptic measures in the lying-in hospitals, we are assured of its value, and the question naturally arises how we are to apply them in domiciliary practice.

Setting aside the question of infection, we will inquire how it is that the poison that gives rise to the disease may be analyzed ?

1st. It may arise through defective sanitary arrangements in the home where the confinement occurs.

2d. It may be conveyed by the nurse.

3d. Finally, the accoucheur may be the means of carrying the disease.

Those of us engaged in village and country practice, have little concern about the dangers that beset puerperal women in a crowded city. The poisonous emanations from sewer pipes and defective drains in the homes of the urban population have no counterpart in country practice. While the general principles of ventilation and cleanliness are necessary factors in the accomplishment of thorough antisepsis, they are much easier under control.

The teaching of Playfair, as well as the practical experience of others, has made it evident that puerperal septicæmia is identical in its symptoms of course with that which arises from other causes.

If typhoid fever, diphtheria and certain forms of sore throat arise from foul air, can we not argue that the poison of puerperal fever may spring from the same source. With the attention given to sexual cleanliness and the avoidance of contact with impurities, there has been at the same time great consideration manifested for the sanitary surrounding of the puerpera. The improvement, then, is attributable to both causes.

The nurse who has an intelligent conception of what is the purpose of antisepsis, and will carry its methods into

practical operation, will add greatly to the success of the accoucheur's practice. It must not be routine merely, but in addition have some knowledge of principles upon which it is based. This extreme degree of cleanliness is a necessity.

We have now reached the point where the duties of the accoucheur himself are to receive consideration. The experience in maternity hospitals above referred to, while not absolutely convincing to every one, should at least persuade all that a fair trial is asked for. An attempt to carry out antiseptic precautions, slovenly done, will cast discredit upon the method. Its rules are simple, and at first seem superfluous, but when once understood and employed, become so easily a part of one's routine practice that they will be no longer regarded as great tasks, one falls easily into the habit.

It is a wise precaution to have the nurse syringe out the vagina thoroughly with warm, carbolized water during the first stage of labor. Unless there have been repeated examinations by the attendant or nurse, or the labor has been unduly prolonged, there need be but one of these douches. Furthermore, every woman going into childbed should, as a matter of course, decently and as a precautionary measure have the rectum thoroughly emptied by a large enema.

W. Wickel, whose success has been marvelous, directs that the vulva, nates, thighs and abdomen be cautiously cleansed by a bichloride lotion immediately upon the beginning of labor. This can certainly do no harm, and does lessen the chances for poison entering the parturient canal. When we fully consider the value of a woman's life during the childbedding period, it devolves upon us to bring to our aid every measure that scientific research and common sense indorse. The results of these simple measures are before us, and we can not disregard their teachings.

The accoucheur should, if possible, avoid contact with pus, erysipelas and all sources of contamination; and, just here, it will be well enough to say a word as to the advisability of attending cases after such exposure. Time does not destroy the vitality of all infecting material. A change of clothing, a warm bath, with free use of soap, and disinfection of the hands, will sufficiently purify the practitioner, even though his exposure has been but a few hours before.

Catheters, forceps, cloths, in fact, all instruments necessary to the completion of the labor, should be scrupulously

cleansed preparatory to their use about the parturient canal.

It is a custom, almost universal, to place under the patient, to catch the enematic fluid, blood and other discharges, an old quilt that has seen years of service. It may have been used on the bed, covering patients having erysipelas, scarlatina, measles and fetia ulcers, and having been numberless times soiled by urinary and fecal discharges of the children in the nursery. If we are to have respect for the prevailing views as to the origin of puerperal septicæmia, we must inaugurate a reform, and introduce some innovations into the lying-in chamber. This will be difficult to do, for in no department of our calling is custom so powerful as in that circle that presides over the functions where a being is to be ushered into this breathing world.

As a rule, it is not necessary to make a routine practice of washing out the vagina when the safeguards have been employed. This is seldom called for, except when the labor has been tedious, or when there has been instrumental interference. If there is a fecal discharge, whether the temperature has risen above the normal or not, safety demands that the stream of a disinfectant solution be forced into the womb. There is some risk attending the use of the sublimate solution, and it should only be used by the medical attendant, never by the nurse.

The above precautions are based upon the view that all cases of puerperal septicæmia are in their origin heterogenetic, but many hold that the fever may originate from within the patient's body, or be autogenetic. In cases supposed to be autogenetic, the woman is most frequently a multipara, the labor long and perhaps complicated, with a dead and putrid fœtus or cancer, or there has been post-partum hemorrhage from a badly contracted uterus, followed by the formation of clots or retention of portions of the membranes or placenta. The uterus being badly contracted, air enters the vagina, and decomposition of contents is the result.

It is readily understood how infection can then be caused, and it is wisdom on the part of the attendant not to take risks, but wash out the uterus whenever a suspicious discharge appears. Do not wait for the chill and fever. It will then be too late. It will be argued that atmospheric air comes in contact with the discharge from every womb after delivery, and why are not all poisoned?

"The doctrine of autogenesis," says Dr. Parvin, "is a

confession of ignorance, the creed of fatalism, the cry of despair.

"It is more rational when we meet with cases of puerperal septicæmia, whose origin we do not know, but which have the same history as others, the source of which we can trace to an external cause, and which have the same evolution and the same infecting power—to conclude, that they too come from like sources, though the connection thread is so fine as to elude our vision than to erect an altar to the unknown god of autogenesis, and imagine we have explained the mystery.

"Self-infection means that the house sets itself on fire, and that the powder magazine is exploded without any mischievous spark. What security can the practitioner have when the foe which brings swift death is created within her, and when she kills herself. This doctrine of the autogenesis of puerperal septicæmia is, to my mind, the very pessimism of obstetric medicine. Why should the city guard its gates when the enemy can already be in the citadel and begin the battle there?—*Progress.*

The Case of His Imperial Highness, the Crown Prince of Germany.

BY SIR MORELL MACKENZIE.

From Lancet, of London, of February 18.

His Imperial Highness, the Crown Prince of Germany, having expressed his wish that I should now place on record my opinion of his case, the opportunity is afforded of correcting some of the statements which from time to time have been inaccurately attributed to me.

The general idea is, that I am of opinion that the disease from which His Imperial Highness is suffering is not cancer;* the view, on the other hand, which I have consistently maintained, is that there never has been any proof of the existence of cancer. To enter more into detail: When I arrived in Berlin last May I stated to my colleagues that, in my opinion, the appearances seen in the throat were of a negative character—that is to say, that the disease might

*In this statement the words "cancer," "cancerous" and "malignant" are used synonymously.

be either benign or malignant, and that its nature could only be determined by microscopical examination. A portion of the diseased tissue having been taken away by me from the throat of His Imperial Highness, it was submitted to Professor Virchow, who could not detect in it anything of a malignant nature. Repeated examinations by Professor Virchow of other portions removed by me yielded similar results.

In the month of July, whilst His Imperial Highness was staying in the Isle of Wight, I pointed out to more than one of his august relatives that the danger that I most dreaded was the occurrence of perichondritis at a future date, and three months later this fear was proved to be well grounded. At the end of October and early in November entirely fresh symptoms appeared, and at that time the local disease presented an appearance which was consistent with the diagnosis of cancer. It was then impossible to obtain any fresh microscopical evidence in the matter, and I considered it safer, accordingly, to treat the case as one of a malignant nature. At the same time, however, I drew up and submitted to my colleagues a protocol, in which I stated that, although the disease at that moment looked like cancer, I could not agree that the malady was proved to be malignant until a further microscopical examination had been made. The document in which I set forth my views was forwarded to Berlin to be placed in the State Archives. Although the unfavorable symptoms then present were explicable on the ground of the existence of cancer, yet it was clear to the majority of the physicians at that time in attendance that perichondritis had supervened.

In the middle of December, however, the unfavorable signs had passed away, and there were no longer any clinical symptoms of cancer. Microscopical evidence on the subject was, however, still wanting. This was furnished at the end of January, when a slough was expectorated from the very spot which had presented such a highly suspicious appearance in November. This slough was most carefully and repeatedly examined by Professor Virchow, and the result (which is now published) again shows that cancer could not be detected.

To recapitulate. In my opinion, the clinical symptoms have always been entirely compatible with non-malignant disease, and the microscopical signs have been in harmony with this view. I need only add that, although in nearly

every case of laryngeal disease it is possible at the first inspection to form an accurate opinion as to the nature of the disease presenting itself, yet in a few rare instances the progress of the complaint alone permits its character to be determined. Unfortunately, the case of His Imperial Highness is among the latter number, and, at this moment, medical science does not permit me to affirm that any other disease is present than chronic interstitial inflammation of the larynx combined with perichondritis.

San Remo, February 12, 1888.

Report of the Examination of the Slough from the Larynx of His Imperial Highness, the Crown Prince of Germany.

BY PROFESSOR RUDOLF VIRCHOW.

On the morning of January 26, 1888, Dr. Wegener brought me a sealed box, with a letter dated January 23d, from Dr. Shrader from San Remo. It was accompanied by a report dated January 17th, from Dr. Krause, respecting a large piece of tissue which had been expectorated on the same day from the larynx of H. I. H., the Crown Prince.

The portion sent was the whole of the matter expectorated, with the exception of six small particles removed by Dr. Krause for examination in the fresh state. The piece of tissue was in a sealed bottle containing absolute alcohol. In addition to the large portion referred to, there were also two other separate and somewhat harder pieces—a larger and a smaller. The former, according to Dr. Krause, was originally a part of the principal mass. The examination offered great difficulties, the nature of which could not have been anticipated, either from the form or the appearance of the pieces submitted for investigation. The large mass greatly resembled certain portions of imperfectly masticated pieces of meat which are sometimes rejected in vomiting after being swallowed. This view seemed to derive support from the presence here and there of small yellow and brownish particles of fine cellular vegetable structure; and from the existence in the innermost portion of the large piece (expectorated) of an abundance of elastic fibers.

In consideration, however, of the very precise information conveyed by Dr. Krause to the effect that the sub-

stance had been observed before its separation (from the larynx) extending from beneath the left ventricular band from the middle to the anterior angle, and also below the glottis and even round below the anterior part of the right vocal cord," there could be no doubt, on further examination, that we had to deal with a large slough spontaneously separated from the inner surface of the larynx, and not with a purely exudative (fibrinous) mass. In the substance, which, according to the report of Dr. Krause, when first expectorated, measured three and a half centimeters in width, whilst at the thinner end it was half a centimeter in width (its thickness being four millimeters), and at the thicker end one centimeter wide, a small, smooth, semicircular spot in its long diameter could be seen. All the rest of the surface was occupied by long and very closely arranged fibers. Although there was no epithelium on the smooth spots and no glands beneath it, it can not be doubted that this was the free surface of the mucous membrane. For beneath it could be seen microscopically a thin layer of almost homogeneous connective tissue and a great mass of elastic fibers. Beneath this there was deeper down a very thick layer, consisting especially of tubules with granular, amorphous contents. From this thick layer originated the long fibers observed with the naked eye. It was not once possible to recognize in these tubular layers and transverse stripes, but they seemed to contain only amorphous matter, in which, on more minute examination, numerous micrococci were found. Here and there numerous, but very small, clear blown bodies or crystal-like deposits were observed. Nevertheless, I have no doubt that these tubular layers and fibers are primitive muscular fasciculi, which through a necrotic process have been destroyed. The slough must, therefore, be regarded as a necrotic and decomposed part of the larynx, which, in parts, has been separated from the surface to a depth of four millimeters. The very rich muscular structure could only be attributed to the thyro-arytenoid muscle.

I could not determine what kind of morbid process had caused the gangrene, nor what kind of process had produced the demarkation and exfoliation of the substance. Neither pus-corpuscles nor granulation-cells could be distinguished, and, in fact, in most places there was nothing of a heterogeneous nature to be discovered. Only in the larger (of the two smaller pieces), which had been cut off

the main mass by Dr. Krause from a somewhat hard spot, and which had the form of a flat wart on section with the naked eye, a central whiter, and an external and opaque rather thick covering could be distinguished. In every microscopic section so-called nests (*Zwiebln*) of epidermoidal cells, for the most part of a homogeneous character, were seen. As a rule, these nest cells were in the most external layer or in that lying immediately beneath it. The external layer had also most likely consisted of an epidermoidal formation, though these cells could only be here and there partially distinguished. I could not find epidermoidal cells in the deep parts, and distinctly isolated alveoli were nowhere to be discovered, in spite of assiduous researches.

These examinations will be continued, and if any further result is obtained I will send a report instantly.

(Signed) RUDOLF VIRCHOW,
Director of the Pathological Institute, Berlin.

January 29, 1888.

Professor Virchow has since sent several private letters, in which, however, he has not been able to add anything to his original report. Nevertheless, he remarks that he has not found any cartilage in any portion of the slough.

Removal of a Fibroid Tumor from the Uterus.

BY EDWARD C. HARWOOD, M.D., NEW YORK,

Honorary President Fourth International Medical Congress, Brussels; Visiting Physician to Hospital for Nervous Diseases, Fellow of the New York Academy of Medicine, etc., etc.

MRS. J. H., a native of Scotland, a robust woman, aged thirty-nine, has been married for twelve years. She has been pregnant twice. The first conception occurred about four months after marriage, which resulted in a miscarriage near the fourth month of utero-gestation. Three years later she again miscarried at the term of three months, on which occasion she was almost wholly without professional care. The first evidence of the abnormal condition of affairs under consideration, was an increase in the flow of blood at her monthly periods, both in quantity and duration. At these times the amount of blood lost was so great as to reduce her very much in strength, and she was very weak and

anæmic for a period of several days thereafter. On account of her general robustness, however, she would regain her former physical condition by the time her next monthly period came around. This train of symptoms was repeated month after month, the duration of the monthly flow constantly increasing. After a time, an offensive, vaginal discharge of a reddish brown color was established between her monthly periods, and this, though at first small in amount and appearing only at intervals, finally became almost continual.

This was the condition of affairs that prevailed at the time she applied to me for treatment, early in the summer of the present year. Upon examination I found the uterus enlarged and the os dilated to the size of a silver dollar. The canal of the cervix was filled with a mass of tissue which was evidently of a neoplastic origin. It was at this time remarked that the patient had an exceedingly large clitoris, which was abnormally sensitive. She suffered from an irritable bladder, which compelled her to get up several times during the night to pass her urine. The ovaries were normal, but more than usually tender at the time of her periodical flow. Upon attempting to explore the uterine cavity the hemorrhage from the mass that filled the cervical canal was so profuse that a thorough examination was considered inadvisable.

The indications of the case clearly pointed to the desirability of operating at once, but the domestic duties of the patient were of such a nature as to preclude the possibility of her submitting to an immediate operation. On the onset of the summer months it was decided to give the patient such palliative treatment from time to time as the exigencies of her case demanded until the arrival of cooler weather. She was at this time seen about once a week. The local treatment employed consisted in the application of tampons of absorbent cotton saturated with the following mixture:

℞. Alum Exsic., . . . ℥ jss.
Aqua, ... ℥ j.
Acidi Carbolici, . . . ℥ ii.
Glycerini qs. ad., . . ℥ xii.

During the periods intervening between the visits of her physician, she was directed to make one or more antiseptic vaginal injections daily according to the profuseness and disagreeableness of the vaginal discharge. Teaspoonful

doses morning and night of equal parts of Bendiner's Viburnum Compound, which consists of

Fl. Ext. Black Haw,	℥ ij.
" " Scullcap,	℥ ij.
" " Wild Yam,	℥ j.
Tinct. Cinnamon,	℥ j.

Mix.

and Squibb's fluid extract of ergot were prescribed, with the additional directions that in the event of any considerable hemorrhage, the doses were to be increased, if necessary, to once an hour. Iron, quinine and strychnine were also administered internally. By this means the hemorrhage was controlled and the vital power well sustained. The mass within the uterus gradually but steadily continued to increase in size, so as to protrude three-quarters of an inch from the external os.

On September 14th, in company with Dr. J. Henry Fruitnight, of this city, I proceeded to the house of his patient in Tarrytown. She was there anæsthetized by Dr. N. H. Freeland, a local physician, and placed upon an operating table, in Simon's position, with the thighs well flexed upon the abdomen, and her legs upon her thighs. Having anointed my hands with carbolized vaseline, I made a digital exploration of the uterine cavity and found, instead of a pedunculated tumor, one that was sessile, its attachments to the uterus being on its anterior wall, extending from the os upward to the fundus, and half-way down the posterior wall of the uterus. The anterior attachments were so pliable that with the nail of the index finger they were readily separated from the uterine wall. By the aid of a pair of scissors and an ordinary curette, I gradually transformed the sessile tumor into a pedunculated one, with the pedicle attached to the fundus of the uterus. At this stage of the operation an écraseur was placed about the artificially produced pedicle and the mass removed. It was estimated to weigh about six ounces, and but a slight amount of hemorrhage followed its removal. The uterus was afterward thoroughly curetted so as to remove all trace of the neoplastic growth. The uterine cavity was then wiped out with borated cotton, the pledgets being pressed against the walls of the uterus for a few seconds, so as to absorb the slight amount of blood that continued to ooze from their surfaces.

After the operation the patient was placed in a bed which

had been made warm by placing a dozen earthen platters between the clothing. At night a Dover's powder was administered. On the morning following the operation, the temperature was found to be normal, the patient voiding her urine without difficulty. The highest thermal point reached since the operation was 99° F. Every third day a uterine suppository composed as follows:

℞. Plumbi Iodid., . . . gr. iiss.
Ext. Belladon., ... gr. $\frac{1}{24}$.
Cacao, ... gr. xv.

was introduced into the cavity of the organ; at the same time the following pill, devised by Dr. Fruitnight,

℞. Acid Phènic., . . . gtt. $\frac{1}{4}$.
Quinine Sulph., . . . gr. v.
Morph. Sulph., . . . gr. $\frac{1}{6}$.
Ol. Menth. pip., . . gtt. ss.

was administered internally for its prophylactic antiseptic action, according to the indications present.

The patient now promises a complete recovery.

Improvement on Hey's Operation.

Dr. R. H. Spencer, of Pewamo, Mich., reports the following case with the idea of demonstrating that in injuries of the feet where only the toes and ends of the metatarsal bones are involved, an amputation may be performed that will give a longer and more useful stump than that obtained by the Hey method of operation.

Peter Shafer, aged fifty, a farmer by occupation, had his left foot caught in the revolving cylinder of a threshing-machine. All the toes and ends of the metatarsal bones were torn away, and also the entire skin of the upper part of the foot back to the prominence of the instep. The thick plantar skin was intact for the most part. Assisted by Dr. Weller, the patient was placed under an anæsthetic, an Esmarch's bandage applied, and the foot was amputated in the following manner:

An incision was made down to the bone, directly across the foot, about half an inch from the prominence of the instep, carrying it down to within one-half an inch of the sole of the foot on both sides. The metatarsal bones were

then sawed completely through and the plantar skin and facia dissected away for a flap. Bleeding from the arteries was for the most part controlled by tortion. Three arteries, however, were tied with silk thread, the ends of which were brought out at the external angle of the wound.

The wound, before being closed, was thoroughly cleansed with antiseptic solution. It will be seen from this account that the entire flap came from the plantar surface, and consequently the resulting cicatrix was at the top of the foot, out of the reach of all pressure in walking. The wound healed throughout two-thirds of its extent by first intention, and at the end of four weeks the man was walking about. He limps but little, and is able to do any kind of farm work.

The above operation was performed three years ago, and the stump has never given the least trouble.

Facts in Relation to Emaciatin .

BY THOMAS TAYLOR, M.D., OF WASHINGTON.

Abstract of Paper read before the Medical Society of the District of Columbia.

For several years past I have devoted much of my time to the crystallography of animal fats, and have examined, crystallized and photographed the fats of several hundred animals, and a few vegetable oils. In the prosecution of this inquiry I observed incidentally, that the fats of several monkeys, victims of consumption, when rendered, strained and cooled, at a temperature of about 70° F., according to my usual method of treating fats in order to crystallize them, exhibited but a trace of the solid fat; the mass consisted principally of olein. From this fact my attention was directed to the consideration of the fat of human beings, subjects of emaciating diseases, from whatever cause. I have tested the fats of three consumptives who were greatly emaciated. The fats were crystallized in the usual manner—boiled, strained and cooled, at 70° F.—and, when examined, were found to be nearly destitute of solid fats, olein largely predominating.

While the cases cited are insufficient data for determining what may be the invariable condition of the fats of emaciation, I deem the facts thus far observed worthy of attention, and I propose to continue these researches in order to ascer-

tain whether the conditions I have stated are constant. If in the animal economy it can be shown that there is a greater tendency to oxidize the solid fats than the oil, in cases of high temperature and emaciation, valuable information will be gained.

With regard to the composition of fats in general, they consist of three distinct fats, viz.: olein, palmatin and stearin. These are known as glycerides of the fatty acids oleic, palmatic and stearic. Early chemists applied the term margarin to a substance they believed to be a simple fat, but modern chemistry has demonstrated that this substance is merely a combination of palmatin and stearin. It has been demonstrated that the fat of milk and butter contains but a trace of stearin, and that it is composed mostly of palmatin and olein, and it is also stated on high authority that the fat of man is of similar composition.

In my investigations relating to the forms of animal fat, I have observed that the crystals of human fat have a marked resemblance to crystals of milk-butter, suggesting the importance of the use of milk-butter as the proper form of fat for man, and superior to fats which consist largely of stearin, such as some oleomargarines I have tested.

According to modern chemistry stearin requires a temperature of 144° F. to melt it, and in each succeeding fusion a still higher temperature is required. For this reason the common fats can not be as well adapted for the sick as butter, which melts at blood-heat. Therefore I think it might be well to test the value of pure butter as a substitute for other forms of fat now in use in cases of emaciation. In this case I would suggest that butter used for this purpose be boiled and strained to remove its casein, the casein of milk frequently proving very indigestible and unbearable to a weak stomach.

Milk, the natural food of man, contains all the essential proximate principles necessary to build up a perfectly healthy human being; but the butter fat of milk contains but a small proportion of nitrogenous matter as compared with the milk from which it is made; therefore, butter of itself does not afford sufficient nitrogenous matter to sustain life but for a limited period. As it is desirable to make sure that the diet contains a proper amount of nitrogenous matter, in an acceptable form, I recommend the use of peptonized beef, in other words, digested beef, in connection with

butter so treated. Such a combination would build up the vital tissues.

As the solid fats of butter contain a larger amount of carbon than is found in the same amount of oil, the oxidation of these solid fats would contribute more animal heat than would the oxidation of the oil. In this process water would be formed, the elimination of which would lower the temperature of the body, thus tending to arrest the destruction of the tissues.—*The Journal.*

The Treatment of Wounds by Iodoform Tampons.

Dr. F. Bramann reports (*Archiv für Klinische Chirurgie*, Berlin, 1887) the results of treatment of wounds in von Bergmann's clinic for some years past. The gauze employed is sterilized by means of steam at 212°, and after drying may be impregnated with an antiseptic solution. The sterilized gauze is used in cases of trifling operations in small wounds. In larger wounds with more profuse secretion, it was thought best to obtain whatever advantage could be derived from the impregnation with corrosive sublimate, especially as the patients and operators are in the immediate vicinity of an audience coming direct from the anatomical rooms. The cotton employed is of late years merely sterilized. The towels, gum cloths, sponges, etc., are treated in a like manner. The silk used in sutures is wound on glass or metal spools, sterilized by steam, and inclosed in metal caskets. The catgut used for deep stitches (stitches of relaxation), and for ligatures, is kept ten to fourteen days in a solution of 4 parts bichloride, 800 of alcohol, 200 distilled water. This is frequently renewed. The catgut is then changed to an alcoholic sublimate solution of 1 to 800 alcohol and 200 parts of water, and is taken direct from this. The preparation of the patient consists in giving full baths, washing the region of operation with soap and water, shaving the part, rubbing the skin with ether, and disinfecting it with from 1:1000 to 1:200 solution of sublimate. The instruments are kept in a three per cent. solution of carbolic acid. During the operation the wound is often irrigated with 1:2000 bichloride solution. In operations in the abdomen, the pleural cavity, the mouth, rectum and bladder, salicylic acid 1:1000, or boric acid 1:200 is employed, and

at the end of the operation a solution of iodoform in ether is generally used.

Next to strict antisepsis, the complete stoppage of bleeding is regarded as the chief agent in procuring union by first intention.

When the wound is dry, and the smallest bleeding vessels have been tied, the suture is applied with or without drainage, but only in those wounds which are considered absolutely antiseptic, and have not been infected through previous suppuration or contact with unclean materials. Among the cases treated in this manner are included all extirpations of tumors, removals of breasts, amputations, osteotomies, etc.

In wounds where the bleeding can not be entirely stopped the formation of a large clot is objectionable, not only on account of the pressure which it may make, as in fractures of the skull, but because of the risk of decomposition and blood poisoning. Although such clots may, through absorption and organization into connective tissue, aid in the process of repair, they sometimes remain fluid for long periods, and during that time are a source of danger. Therefore, when it is impossible to dry the wound absolutely, or where there is the least suspicion that it is not entirely aseptic, after thorough disinfection with 1:1000 bichloride solution and with an ethereal solution of iodoform applied to the wound by means of a syringe, it is loosely packed with strips of iodoform gauze of several feet in length, and three to four inches broad. They are applied so that the larger part of each strip lies in the wound, and the ends come out at the angles. The sutures were formerly put in at this time, but this has been abandoned on account of the difficulty in keeping them disentangled, and of their adhesion to the iodoform gauze. The patient is now anæsthetized a second time for the application of the sutures. The tamponed wound is covered with sublimate gauze and cotton, and an antiseptic bandage. If the secretions make their way through the dressings, the superficial layers are renewed, but the iodoform gauze is allowed to remain undisturbed for two days. If it is then removed by gentle traction on the ends hanging out of the wound, the latter is found clean, unirrigated, not reddened, absolutely dry, and it is only very exceptionally that a ligature is required. Careful suturing with or without drainage, has resulted invariably in union by first intention, even in thoses cases in which, for any reason, as great weakness, or for the stoppage of bleed-

ing from large vessels, the tampon has been left in from four to six days. His report of his result is extremely interesting, includes a large number of important cases, and appears to confirm his estimate of the value of this method.—*American Journal of the Medical Sciences.*

The Treatment of Carbuncle with Carbolized Spray.

BY PROFESSOR VERNEUIL, PARIS.

For nearly forty years, during which time I have been practicing surgery, I have seen a great variety of methods employed in the treatment of carbuncle, and have observed that these methods tend to become less and less surgical or operative, but are no less efficacious on that account. At the beginning of my practice, like others, I treated this affection with very deep and long incisions. But I soon observed that this cruel practice was not at all necessary, that it was even dangerous sometimes, and that in the majority of cases recovery was just as rapid without this proceeding. I then recommended, some time ago at the Societie de Chirurgie, to use the knife only in cases where the pain was violent, and when the disease showed a tendency to spread rapidly, leaving to themselves those which were not very painful, or in which the affection was circumscribed.

As soon as Paquelin's thermo-cautery was introduced into practice, I substituted its use for that of knives, which often aggravates the disease by leading to septicæmia, hemorrhages, etc. I made deep and multiple openings, disposed in rings over the affected parts, plunging the cautery into the healthy parts all around. The dressing was an antiseptic, carbolized one. The objection to this method was the time it required. When the lesion was extensive, as many as one hundred and fifty cauterizations were sometimes necessary, and they took at least twenty or thirty minutes to carry out—the patient being, of course, obliged to be put under the influence of chloroform.

In 1881 I had established the following rule: "Exceptional intervention only in grave and well-marked cases; but applied with energy." I varied my *modus operandi*, however, according to circumstances; and instead of using both the cautery knife and the cautery point, I used only the latter.

Such was my practice when, in 1883, I saw a very grave case of carbuncle situated at the posterior region of the neck in a man of strong constitution, but who was suffering from well-pronounced diabetes. The carbuncle was opened at its center, and was progressing rapidly notwithstanding numerous incisions had been made with the cautery, and the wound had a very bad color. On my first visit I decided that additional openings would be required, and that I would make them the next day. In the meanwhile I ordered the wound to be twice sprayed for one hour with a two per cent. solution of carbolic acid. On the next day the wound had no odor, and considerable diminution of the redness and swelling had taken place. I then resolved to try this method further.

Since then I have used the sprays exclusively against *all* carbuncles—small, medium or large; diabetic or not; painful or painless; still closed, or opened naturally, or by artificial means. This very simple mode of treatment I found superior to all others, in stopping the sufferings soon and in rapidly limiting the extension of the disease.

Amongst the cases I have treated, I may cite that of a young professor of the Paris Faculty of Medicine, who died lately of diabetes complicated with albuminuria. He had a very large furuncle, or boil, on his left cheek, with diffuse and deep extension and considerable surrounding œdema. The prognosis was grave, not only on account of the seat of the trouble, but also on account of the presence of sugar, 3.5 per cent. Cardiac and pulmonary lesions rendered the administration of chloroform dangerous. I resorted to the carbolized spray. After the first application the œdema disappeared, the pain diminished and disappeared entirely in forty-eight hours; and after seven or eight days, in six of which the spray was used four times, the large furuncle was reduced to a medium-sized ecthyma pustule; and it was entirely healed by the seventeenth day.

Of course this treatment will not prevent accidents which may occur when the carbuncle has given rise to an extensive sphacelus in extremely cachetic patients. But in the majority of cases, if taken early, we have in the spray an abortive treatment for carbuncle.

The manner of using the carbolized spray is known to every surgeon. A convenient apparatus is the atomizer, which is heated by alcohol, and which will work for twenty-five minutes. Such an one is sufficient for small or medium-

sized carbuncles, and for those which are already opened. For the large tumors, where the skin is not broken, it is better to use a more powerful apparatus, which gives off a more abundant vapor and has a more considerable force of penetration. The apparatus is placed from one to two feet from the skin, regulating the spray according to the sensation of the patient. I generally place nothing between the carbolized vapor and the wound, or I place there only a single thickness of transparent gauze. Up to this date I have used only the two per cent. solution of carbolic acid. I have not tried other antiseptic solutions, being contented with the results obtained with carbolic acid, which, in my experience, has never irritated the skin nor produced any symptoms of general disturbance. The number of applications of the spray is variable. Usually three or four sittings of half an hour each, every day, are quite sufficient. Between the times of spraying, an antiseptic, carbolic dressing should be applied to the lesion. The patient might find so much relief from the spraying that the sittings could be made much more numerous—six or eight a day. The following precautions must be taken in this method:

1. Carefully protect the normal parts surrounding the carbuncle with compresses, rolled napkins, perforated cushions, or pieces of adhesive plaster perforated at the center, according to the region which is occupied by the lesion; at the same time protecting the patient's linen and bed-clothes from becoming wet.

2. Place the patient in an easy position, so that he shall not be tired during the spraying. When the boil, or carbuncle, is at the back of the neck, or on the back, the patient should be seated on a chair, so that he can rest his folded arms on the back of the chair. When the disease is situated in the perineum, or near the anus, the lithotomy position is the best; and when it is in the lateral, lumbar or gluteal regions, the patient should lie on the side with the lower limbs flexed.

The treatment by the carbolized spray is not only very simple, but also adapted to all forms or phases of the disease, being the same from the first day to the last. When used at the beginning for a small carbuncle or boil, it has a good chance of aborting it entirely. Later, when the swelling is voluminous or has a tendency to increase, it will stop its progress. Later still, when mortification and perforations of the skin have begun, it limits the sphacelus, helps to the

separation of the mortified tissues, disinfects the wound, keeps it clean, and by so doing reduces the temperature and symptoms of general disturbance. Its advantages are increased by the fact that its application does not demand the use of chloroform, and that there is no need to touch the tumor or irritate it in any way. I have said, and I repeat, that the old method of incision with the lancet was far from being innocent, that these incisions produced in enfeebled patients severe hemorrhages, which were difficult to arrest, and which necessitated the use of painful hemostatics; and that they were capable of developing septicæmia, of propagating gangrene, and of favoring the absorption of putrid matter.

Many surgeons, after having opened a carbuncle, freely scrape, excise or press the spongy mass to evacuate the pus and gangrenous materials. But these proceedings are at the same time dangerous and painful, and should be absolutely avoided; for the use of carbolized spray renders them unnecessary, by disinfecting the wound.

In order to appreciate the danger of using force on a carbuncle or furuncle, one must remember that the infection is of an infectious character, and that the tumor contains pathological microbes capable of extending on the surface, or of colonizing in the interior, by auto-inoculation, or by entering the general circulation.

This last fact is not as well known as it might be, although it is known that a carbuncle, and even a boil, is capable of giving rise to fever, general symptoms, and even visceral manifestations—albuminous nephritis and deep abscesses, for example.

In conclusion, I would state the following views:

1. Furuncle and carbuncle are only different stages of one infectious disease, and are to be treated by the same therapeutical means.

2. The treatment consists in surgical interference or medical applications. The first was formerly thought to be indispensable, or at least was resorted to in a majority of cases. The second were thought to be efficacious only in mild cases, and were employed as secondary measures of relief.

3. To-day surgical intervention is becoming less and less necessary, and should be reserved for exceptional cases; on the other hand, antiseptic solutions of carbolic acid, of boric acid, etc., used in a peculiar way, and especially under the

form of prolonged and repeated atomization, are remarkably efficacious, while they are at the same time very simple and free from danger.

4. Sprayings, with very few exceptions, lead to a rapid recovery from the manifestations of furuncle or of a small carbuncle, and they check the disease in graver cases. They very rapidly put an end to the pain, the fever and the general symptoms; they disinfect the purulent and gangrenous spots, and assist the cleansing of the lesion and the formation of granulation tissue.

5. Sprayings may be used in any region of the body for all forms, and in all stages of the disease. They are never dangerous, and will alone bring on a cure in the majority of cases. They would also help greatly to the success of surgical interference, if such should be deemed necessary.

6. Finally, they prevent auto-inoculations and the phenomena of general infection.—*Med. and Surg. Reporter.*

Two Cases of Recto-Vaginal Fistula Occurring at Labor: Immediate Operation: Recovery.

BY WALTER B. CHASE, M.D., BROOKLYN.

Read at the meeting of the Medical Society of the County of Kings, Nov. 15, 1887.

SEVEN years ago I attended Mrs. —— in labor, aged about twenty years. The patient was in excellent physical condition, and the first stage of labor was completed within a reasonable period of time. The second stage was quite slow, but progressed favorably until the head pressed upon the perinæum, and though the pains were regular and vigorous, and seemed adequate to overcome normal resistance of the soft parts, it did not advance. After waiting a proper length of time, I applied Elliott's forceps, and, with very moderate traction, brought the occiput out from under the pubes, and as the head was, as it appeared, just passing the perinæum, which was fully distended, I did what is often my custom—removed the forceps.

After waiting patiently for two or three pains, at each of which it seemed the head would pass, but as it did not advance, I introduced the forefinger of my right hand into the rectum and made gentle pressure forward and upward, when, to my great surprise, my finger passed directly into

the vagina, making, as it passed, a rent in the recto-vaginal tissues about one-half inch above the sphincter of the anus, three-quarters of an inch in length, from which two or three pints of amniotic fluid burst forth in a stream, as water flows from a penstock, passing through this rent and the anus, forming a large puddle at my feet. The explanation as to the arrest of the normal progress of labor in the second stage, and the delay which preceded the escape of the head from the perineal grasp, was now apparent.

The close approximation of the uterine and vaginal tissues to the entire circumference of the fœtal head during all of the second stage of labor, had prevented the escape of that portion of the amniotic fluid which was behind the head at the time of the rupture of the membranes, and had left the uterus distended, distributing the uterine pressure over a much larger area of surface than it should have done, thereby diminishing the propulsive and expulsive power of the uterine contractions, a condition not unfrequently met with in the practice of every obstetrician, which is only another demonstration of the same principle of increased expulsive uterine power as manifested very frequently in labor, by the rapid delivery of the patient when the membranes rupture either spontaneously or artificially after the first stage of labor, for the more nearly the uterus is emptied the thicker its walls become, and the greater its power as a contracting force. The tense condition of the recto-vaginal wall, on account of the pressure of the fluid between it and the fœtal head, serves as a rational explanation as to how very moderate pressure, which, under ordinary circumstances, would have been perfectly harmless, was, under these circumstances, followed by tear and the condition of recto-vaginal fistulæ. To avoid, if possible, the consequences of such an injury, I decided to operate at once, and was assisted by Mr. Frank L. R. Tetamore, then a medical student, but now a practitioner of medicine.

The parts were easily reached and exposed through the vagina, and the torn surfaces were accurately approximated by three or four interrupted sutures of fine silk, and tied on the vaginal surface. These were introduced by a small, curved needle, with the forefinger of my left hand in the rectum as a guide, care being taken to place the stitches near the margin of the opening, with a view that, should they cut their way out without union taking place, the fistulous opening should not thereby be made unnecessarily

larger. One week thereafter I examined the patient, my friend, Dr. Geo. R. Fowler, being present, at which time the fistulous opening was entirely closed, and the patient made an excellent recovery.

Case II.—Mrs. ——, aged about twenty-one years, a primipara, was delivered September 26, 1887. I saw the patient twelve hours after labor. Her physician, who is a careful obstetrician, informed me that when he was called to attend the woman, she had been in labor for thirty-six hours, under the care of a midwife who had deserted the case, and at that time he found the head pressing upon the perinæum. The pelvis was relatively small as compared with the diameter of the fœtal head, and, after waiting a short time to satisfy himself of nature's inability to complete the labor, he applied forceps and delivered the mother of a living child.

Though the delivery was terminated, as I believe, with consummate skill, the doctor informed me there was complete rupture of the perineal body, also a rent in the posterior vaginal wall communicating with the rectum. A careful inspection of the parts revealed an irregular rupture of the perineal body, slightly to the left of the median line and partially around the anus, and a second laceration at an acute angle with the first, commencing about an inch and a half above the anus and running in the direction of the right labia. There was a tear parallel with the long axis of the vagina at the bottom of the upper portion of the ruptured perineal body three-quarters of an inch in length, one inch above the anus, extending into the rectum, and from this fistulous opening considerable fecal matter had escaped into the vagina. On either margin of this opening the tissues covering the rectal wall were stripped up, the gut being uncovered and making a ragged and rather irregular opening. The steps of the operation were briefly as follows:

The parts were carefully cleansed by washing, and made as nearly as possible aseptic by the use of hydronaphthol solution. By flexing the woman's legs upon the abdomen and making lateral pressure at the line of rupture, the torn structures were brought into easy view. The integrity of these tissues was so greatly impaired, from long sustained pressure of the fœtal head, as to leave but little resistance, and great care was required in introducing and tying the four interrupted catgut sutures so as to properly approximate the parts without further tearing, after which the double rupture in the perinæum was closed with the same material,

and the patient's knees fastened together. Instructions were given to use a warm, carbolated, vaginal douche night and morning, and small doses of opium were given to restrain any evacuation of the bowels, though a spontaneous evacuation occurred on the fifth day.

An examination made by myself on the eighth day showed the fistulous opening to have closed in about three-quarters of its extent, though at this time small bodies of fecal matter were escaping into the vagina, about the size of a small pea, but after a few days these disappeared, and the patient said that neither gas nor any of the contents of the bowels passed from the bowel. One of the gentlemen who assisted me at the operation, kindly examined the patient on November 5th, and informed me that the fistulous opening has entirely closed and that the perinæum is intact to about two-thirds its extent.

So far as my observation goes, these are the only cases of recto-vaginal fistulæ I have met with as an immediate accident of labor, as a giving way of the recto-vaginal septum above the sphincter is commonly attended with complete rupture of the perinæum, including the sphincter. While unable in the time at my command to find much on the literature of the subject, I deem these cases of sufficient interest to be reported, and hope that the observations of some other members of the Society will add to our knowledge of the subject.—*Brookiyn Med. Jour.*

Oxaluria.

BY J. E. HOFFMAN, M. D., POUGHKEEPSIE, N. Y.

According to some writers, oxalic acid is considered to be present in normal urine in the form of oxalate of calcium.

Within the past year and a half I have been able to gain quite a little experience with this dreaded substance, and what began as an accidental discovery, has become to me a serious subject; and what I believed to be of rare occurrence, has turned out to be remarkably frequent. In the *Medical Age* of June 25, 1887, will be found a brief article on a case which came under my notice during 1886, also an explanation of how to detect the crystals under the microscope, as well as an outline of my course of treatment.

Since writing the above article, however, I have had ample opportunity of seeing the more serious consequences of this condition, and will, therefore, briefly give an account of my observations.

According to "Neubauer," oxalic acid is often the result of chemical action on vegetable and mineral substances. Also during the process of oxidation of uric acid, kreatinine, leucin, etc.

In the five or six cases which have come under my notice, I found the following corresponding conditions and symptoms:

These patients are decidedly bilious, suffering with torpidity of the liver; they are extremely nervous and melancholy, suffer with constipation, indigestion, a coated tongue, difficulty of breathing and wandering pains (not always present); more or less loss of sexual power, with great irritability; a discharge of mucus mixed with pus, which even comes when straining at stool. These patients are notional and filled with gloomy thoughts and forebodings. Aside from these symptoms I find in *all* cases a very marked irritability in the lumbar region of the spinal cord, with great sensitiveness. In some, the principal force appears to be on the nervous system in general; in others, on the vasomotor nerves, as there are palpitation, asthma, a slight hacking cough and varicose veins.

Microscopical appearance: The urine is highly charged with oxalate of calcium, mucus, pus, blood corpuscles. In one case I found spermatozoa very scant and apparently dead, even though the urine had each time been examined from but three to five hours after it was passed. A very striking characteristic of this condition is, the color and odor of the urine; the best description I can give is that the urine has the color and smell of oranges. Where the urine is alkaline, the odor holds out for several days; but where it is acid, this perfume is, after twenty-four hours, strongly combined with the putrid smell of decomposition.

Cause: Medical opinions seem to differ widely as to the cause of this disease; all in all, our knowledge appears to be very limited, rather than anything positive. From what I have seen of these cases I should be tempted to look for the direct source in the functions of the liver. It seems to me that the chemical decomposition is in some way impaired in that organ.

Many authors consider oxaluria a symptom and *not* a

disease. The formation of the crystals of oxalate of calcium may, and most likely are a symptom, but goes to show that there is more seriousness connected with it than many of the profession will admit. If this were but a passing difficulty, why should it in *all* cases be accompanied with more or less disturbance of the nervous system? Why would it be found in cases of almost complete impotency? I have carefully examined many samples of urine, but *never* found oxalate of calcium in any normal condition. I have only found it in such cases where the disturbance in the nervous system, or in the sexual organs, became so marked that the patient felt alarmed.

In three of the cases which came under my notice, there was complete loss of sexual power, all three having the spinal difficulty and the oxalate of calcium crystals in the urine.—*Med. Summary.*

Malarial (?) or Paroxysmal Nymphomania.

Reported by J. P. Francez, M. D. Read before the Attakapas Medical Association, Lafayette, December 6, 1887.

G. G., MARRIED; æt. 35 years; mother of five children; native of Louisiana, and subject to malarial fever for many years at intervals, if not from infancy.

One of her aunts died insane; other members of the family are dead from various other causes.

Mrs. G. has suffered from dyspepsia for years, and previous to her marriage had been subject to two attacks of insanity. Her menstruation at first was tedious or difficult, but at the present time is quite regular and normal.

During last March she began to show dullness of spirits, and fits of great abstraction, causing feelings of indifference toward her husband, children and relatives. One day while sitting upright in a chair she fell prostrate to the floor unconscious. She was put to bed. After a few hours she became quite agitated, talkative and emotionally excited. She was then subject to hallucinations, saw devils, battalions of soldiers and disguised men surrounding her and attempting to force her domicile for the purpose of raping her. She fights with those around her bed; calls on her husband to stand by her side, seizes her new-born babe in her arms, and almost chokes it to death before the attendants have time to take it away from her.

This condition of mind continues twelve days; every second day more pronounced agitation was noted, and late in the evening fever occurred. The febrile movement could not be measured by the thermometer. During the fever and agitation her hands were seen to be between her thighs, violently shaking as if in the act of scratching; groans, murmurs and unintelligible language accompanied these acts.

On the 13th day the mind became lucid, the child was taken to the breast and the family affection seemed to re-animate her. Next night some agitation occurred, with the same acts with the hands. When the intelligence became brighter during the acts, agitation and fever, she would call on her husband and order him to perform his conjugal duties, and repeated her summons for more than a month. On the nights and days free of fever no sexual disturbance was manifested.

The treatment consisted of bromide of potassium and chloral hydrate, sulphate of quinine, infusion of gentian root, muriatic acid diluted, pepsin, external application of iodine to the spleen, Fowler's solution of arsenic.

I kept the case under this treatment for four months. She was discharged cured.—*N. O. Med. and Surg. Jour.*

The Treatment of Pneumothorax.

CLINIC BY PROF. VON BAMBERGER.

With regard to the treatment of pneumothorax, we have to take into consideration two processes: the pneumothorax itself, and the underlying condition which is the cause of it, and which, as a rule, is phthisis. With the latter we shall not now concern ourselves, but rather limit our remarks to the indications presented by the pneumothorax itself. In many cases there is no direct indication for treatment. The condition can not be changed, for even if one were to tap, only a very small quantity of air—perhaps none at all—would escape; for the greater part of the air is under the same conditions, as regards pressure, as that in the lung. Accordingly, when the presence of the air causes no grave symptoms, no marked dyspnœa, and is, generally speaking, no special cause of anxiety, the pneumothorax does not require for itself special attention, but other symptoms which

are of moment should be looked after: the cough, the expectoration, the moderate fever should be treated, sleep should be encouraged, the nourishment should be cared for, and, in short, the general symptoms attended to. However, pneumothorax is not always such a simple matter, but especially in cases where the pleural sac is entirely closed and without internal communication, when the tension becomes very great, and the dyspnœa most urgent, there is a positive indication present, viz.: to remove the superabundant pressure. This may be accomplished more simply by puncture or paracentesis, when the surplus air, or, if the puncture is made in a lower situation, fluid also, will escape, and the patient will be thereby restored to comparative comfort. It is possible, however, that the former condition of things may return after a time, and in this case, if it is necessary, the operation may be repeated. The question for consideration, however, is whether the operation does really produce any important improvement in the condition of the patient. With our own patients here, we do not resort to the operation. We restrict them to the customary diet, that used in tuberculosis; we secure an equable temperature, avoiding cold and sudden changes of temperature, and order light, easily digestible and nourishing food. If the cough is severe we give mild narcotics or expectorants, and in sleeplessness some soporific, and generally speaking treat whatever symptoms present themselves.—*Weiner Medizin Zeitung.*

Artificial Feeding of Infants.

Dr. A. Jacobi, of New York, in a paper on the "Therapeutics of Infancy and Childhood," published in the *Archives of Pediatrics*, says:

The principal substitutes for breast-milk are those of the cow and goat. The mixed milk of a dairy is preferable to that of one cow. Cow's milk must be boiled before being used. Condensed milk is not a uniform article, and its use precarious for that and other reasons. Goat's milk contains too much casein and fat, besides being otherwise incongruous. Skimmed milk, obtained in the usual way, by allowing the cream to rise in the course of time, is objectionable, because such milk is always acidulated. The caseins of cow's and woman's milk differ both chemically and

physiologically. The former is less digestible. There ought to be no more than one per cent. of casein in every infant food. Dilution with water alone may appear to be harmless in many instances, for some children thrive on it. More, however, appear only to do so; for increasing weight and obesity are not synonymous with health and strength. A better way to dilute cow's milk, and at the same time to render its casein less liable to coagulate in large lumps, is the addition of decoctions of cereals. It has been stated before, that a small amount of starch is digested at the very earliest age. But cereals containing a small percentage of it are to be preferred. Barley and oatmeal have an almost equal chemical composition; but the latter has a greater tendency to loosen the bowels. Thus, where there is a tendency to diarrhœa, barley ought to be preferred; in cases of constipation, oatmeal. The whole barley-corn, ground for the purpose, should be used for small children, because of the protein being mostly contained inside and near the very husk. The newly-born ought to have its boiled milk (sugared and salted) mixed with four or five times its quantity of barley-water, the baby of six months equal parts. Gum arabic and gelatin can also be utilized to advantage in a similar manner. They are not only diluents, but also nutrients under the influence of hydrochloric acid. Thus in acute and debilitating diseases which furnish no, or little, hydrochloric acid in the gastric secretion, a small quantity of the latter must be provided for.

Mauriac on Gonorrhea.—It is remarkable, to say the least, that so many cases of rapid cure of gonorrhea are reported, from all parts of the country, and the abortive method by means of germicides still held up for adoption by profession, when those men who are the recognized heads of their departments in medicine, universally admit that they can not cure a specific gonorrhea in less than five or six weeks, and still depend upon the old-time remedies as furnishing the best results. Mauriac, for instance, states that although the results obtained from the injections of corrosive sublimate, permanganate of potassium, chloral hydrate, etc., are seemingly good, in a short time the discharge nearly always returns, leaving the patient about as he was before. Evidently the specific cure for gonorrhea has not yet been found.

Gleanings.

Acute Pulmonary Paresis.—At the last meeting of the Medical Society of London, Dr. B. W. Richardson called attention to a class of cases presenting such peculiar features as to warrant, in his opinion, the belief that the symptoms are due to a loss of nerve power, resulting in acute vasomotor paralysis of the vessels in the pulmonary area. Though not common, most practitioners must be able to call to mind cases diagnosticated as pneumonia, where the patient rapidly dies of asphyxia in spite of all that can be done to check the morbid process. The cases alluded to by Dr. Richardson were mostly in women of a neurotic type. Under the influence of a physical or moral shock, not necessarily of any great intensity, nervous phenomena of a hysterical type manifest themselves, followed by intense prostration of body and mind. In the course of a day or two examination reveals the advent of pneumonic *râles*, and then, without fever, for the most part without pain, and without many of the characteristic signs and symptoms of ordinary pneumonia, the patient rapidly succumbs. Treatment in every case is utterly without avail. Not less interesting than the observations so carefully narrated, are Dr. Richardson's remarks on the effect of nitrite of amyl in bringing about an identical condition of things in animals submitted to its influence. The pathological phenomena are those which physiology teaches us result from section of the nerves which innervate the lungs; and, on this ground, Dr. Richardson argues that the asphyxial phenomena which terminate the rapid and fatal course of this redoubtable disease are attributable to a sudden suppression of nerve power. It could hardly be anticipated that this addition to the medical nomenclature would pass unchallenged; and, while the paper will certainly call attention to a class of cases hitherto very imperfectly understood, his views evidently failed to find acceptance on the grounds put forward in their behalf. It appears certain that, to explain the sudden and violent breaking down which is met with in certain cases of so-called pneumonia, either some influence must have been superadded to the usual processes, or we must look to another category of causes altogether to account for the collapse.

Lafayette Mixture.—A modification of the mixture of copaiba, liquor potassæ, sweet spirits of nitre, and mucilage of gum arabic, known as the Lafayette mixture, was proposed by Bumstead, and is now generally employed in place of the original:

℞.	Copaibæ.	
	Spirit. etheris nitrosi, āā, . .	f ʒ j.
	Liquor potassæ, . . .	f ʒ ij.
	Extract. glycyrrhizæ, . .	ʒ ss.
M.	et adde.	
	Ol. gaultheriæ, . . .	gtt. xvj.
	Syrup acaciæ, ...	f ʒ vj. M.

Dose—a teaspoonful after meals.

Treatment of Eczema and Psoriasis.—In the *Lancet*, December 3, 1887, Dr. A. S. Myrtle, of Harrogate, a well-known watering-place in England, declares that forty years' experience with eczema and psoriasis has led him to the belief that the former disease is spread by scratching. He goes so far as to say, that if itching is prevented, scratching will cease, and the eczema will be cured. He relates several cases of eczema and psoriasis of a most aggravated type, which were sent to him to undergo treatment with the natural sulphur waters of Harrogate. The author declares that all ointments are filthy and injurious in the eczema which is charaterized by diffuse areas with raw surfaces, which exude serum and pus, and are encrusted with scabs, which leave angry sores on their removal. Dr. Myrtle's treatment, in such a condition, is to employ alkaline sulphur baths, at a temperature of 98° F., once a day, gradually lengthening the duration of the bath. Following the bath, the body is carefully dried, and the affected areas covered with fine sheet cotton-wool, medicated with a preparation of coal tar. His treatment for psoriasis is substantially the same, except that he directs the patient to remain in the bath for as long a time as possible without being chilled, and orders the bath at as low a temperature as the patient can bear. He also orders internally a course of sulphur and chalybeate baths, and expresses the belief that painting the old-standing patches of psoriasis with naphthaline tincture, after the sulphur bath, gives most satisfactory results. This latter application may also be used in the old-standing patches of eczema. He regards a quinine lotion as by far the best preventive against recurrent attacks of eczema.

Congenital Syphilis Causing Amyloid Disease.—At the meeting of the Pathological Society of London, November 15, 1887, Dr. Hale White (*Lancet*, November 19, 1887) showed specimens of congenital syphilis which had caused lardaceous disease of the viscera, gummata and fibrosis of the liver and chronic peritonitis. The patient was a girl seven years old, both whose parents had syphilis, and who herself presented most of the signs of a congenital syphilis. The liver could be felt with a hard, rounded edge just above the iliac crest; the spleen reached below the umbilicus; there was some pain and tenderness in the abdomen; the left eye showed disseminated choroiditis and optic neuritis; the glands in the right axilla were enlarged, and there was a painful node over the head of the tibia; the urine was albuminous, and this decided the diagnosis in favor of lardaceous disease. She improved under treatment, but ultimately succumbed to an attack of acute tonsilitis. The liver weighed 61 oz.; it was hard, rounded, with radiating, fibrous depressions all over it; there was also some cirrhosis. At the anterior part was a gumma, the size of a walnut; it (the liver) was extremely lardaceous throughout, as was also the spleen, which weighed 16 oz. The kidneys weighed 12½ oz., and both showed tubal nephritis and lardaceous disease. The small intestine and cervical glands were slightly lardaceous; there were several bands of fibrous tissue indicative of old peritonitis. There was no sign of there ever having been any suppuration. The lardaceous deposit was seen very well under the microscope. The case showed three very rare manifestations of congenital syphilis; lardaceous disease, chronic nephritis, fibrous scars and gummata in the liver, in addition to cirrhosis.

Operative Treatment of Peritonitis.—Dr. Trzebicky, writing in a Polish journal on the operative treatment of peritonitis, details experimental researches on sixty-seven dogs. From these he concludes that operative treatment is indicated in cases of purulent or septic peritonitis; that the employment of different antiseptic substances leads to results differing from one another. The most suitable liquid for washing out the peritoneal cavity appeared to be a solution of salicylic acid. The greatest care is necessary in cleansing the abdomen externally before the operation is commenced. Dr. Trzebicky does not find it easy to explain the variations in his results, but about the facts he has no doubt.

Book Notices.

DISEASES OF THE HEART AND CIRCULATION IN INFANCY AND ADOLESCENCE. By John M. Keating, M.D., Obstetrician to the Philadelphia Hospital, and Lecturer on Diseases of Women and Children, Surgeon to the Maternity Hospital, etc., and Wm. A. Edwards, M.D., Instructor in Clinical Medicine and Physician to the Medical Dispensary in the University of Pennsylvania, Physician to St. John's Hospital, etc. Illustrated with Photographs and Wood Engravings. 8vo. Pages 215. Cloth. Philadelphia: P. Blakiston & Co. Cincinnati: R. Clarke & Co. Price, $1.50.

This work, as implied on the title-page, is more particularly devoted to the diseases of the heart and circulation as found in children and infants. The authors state in the preface that the many excellent text-books on children's diseases have failed to give a satisfactory account of the diseases of the heart; and, indeed, they say that, so far as they know, the work which they now present is the only systematic attempt that has been made to collect in book-form the abundant material which is scattered in the form of journal articles, clinical lectures, theses and reports to societies. They have endeavored, therefore—though the task was a difficult one—to collect these valuable materials and place them within easy reach of those who are interested in this important subject.

Some may think it not necessary to treat of diseases of the heart in children, independently of the same affections in adults, but there are a number of reasons that make it necessary, which we think would occur to almost every physician. Not a few, however, probably are not aware that the position is not the same. The authors describe it as follows: "The heart of a child is somewhat higher in the thorax than that of an adult; its situation, based on several careful dissections, is about as follows: The auricles are on a line with the second intercostal space, the right extending beneath the sternum and almost to its right border. The right ventricle is beneath the sternum and to its left; its lower border is on a line with the head of the sixth costal cartilage. The left ventricle is situated between the third and fourth intercostal spaces and beneath the fourth rib. The

position of the apex-beat differs materially from that in an adult.

"The apex is much higher and nearer the nipple than is the case in an adult thorax; in a certain number of cases the nipple pulsates synchronously with the apex-beat; our investigations lead us to locate the apex-beat in the fourth intercostal space. An examination of ninety-six boys for admittance to Girard College, made by one of us, served to illustrate further the fact that the apiceal impingement has a higher location in proportion to the decrease in the age of the child—that is, in boys of six years it was generally found to be close to the nipple, whereas in boys of ten years its location was found to be from half an inch to an inch lower," etc.

As the works upon diseases of children, as stated, give little or no attention to diseases of the heart, this work of Drs. Keating and Edwards will supply a want. We think that there will be no physician, who takes an interest in the affections of young folks, who will not wish to consult it. It has been the effort to make it as practicable as possible; and, therefore, all unsettled matters have been, so far as possible, avoided. When, however, undecided questions have had to be discussed, authorities on both sides are quoted.

General practitioners of medicine will find the work to be a valuable addition to their libraries. The authors have had very large experience, and very extended observations in diseases of children, and consequently have been able to enrich the volume with much valuable information—information that will greatly assist the medical practitioner in many doubtful and difficult cases in diagnosis, prognosis and treatment.

While depending largely upon their own experiences in treating the various subjects they discuss in the volume, the authors nevertheless admit their indebtedness, to some extent, to French literature. This will form a somewhat novel feature in the work when it is considered for how long a time American writers have quoted exclusively from German writers.

Besides containing very many excellent wood engravings, the work has, in the way of illustration, several photographs pasted here and there upon a page.

PHYSICIANS' AND STUDENTS' READY REFERENCE SERIES. OBSTETRIC SYNOPSIS. By John S. Stewart, M.D., Demonstrator of Obstetrics, and Chief Assistant in the Gynecological Clinic of the Medico-Chirurgical College of Philadelphia. Illustrated. 12mo. Pp. 202. Philadelphia: F. A. Davis.

This little work is specially designed to assist the undergraduate in acquiring a thorough knowledge of the art and science of Obstetrics. It has been prepared under the immediate supervision, and is, to a great extent, the result of accurate note-taking for a number of years of the lectures on Obstetrics of Prof. Wm. S. Stewart, delivered before the students of the Medico-Chirurgical College of Philadelphia.

Prof. Stewart, in the preparation of the *Synopsis*, consulted all the leading works on Obstetrics, as Playfair, Parvin, Lusk, Galatine, Cazeaux and Tarnier, and others, but gave those mentioned the preference. But, in addition to setting forth the teachings of the latest authors as fully as was consistent with the aim and scope of the work, and as far as they corresponded with the teachings he gave to his own classes from year to year, he has culled from recent journals whatever seemed to be of value, so that the work might represent the latest and most approved views.

The work is divided into SIX PARTS. These Parts are devoted respectively to *Physiology*—puberty, ovulation, conception, etc.; *Pregnancy*—diagnosis of, duration of, diseases of, etc.; *Labor*—phenomena, mechanism, management, complicated, etc.; *The Puerperal State*—physiology of childbed, lactation, etc.; *Obstetric Operations*—Induction of abortion and premature labor, use of the forceps, version, abdominal section, etc.

If this little work does not become exceedingly popular with students in attendance upon lectures, it will be due to their overlooking the announcement of its publication among the notices of new publications in the medical journals. It so well meets the wants of medical students, that it seems to us it will only be necessary for its publication to be made known, in order for each one to secure a copy.

It contains very many well-executed illustrations, which will aid much in making the descriptions easily understood.

AMERICAN PUBLIC HEALTH ASSOCIATION, Lomb Prize Essay. Copyrighted by Irving A. Watson, Secretary American

Public Health Association. Four Pamphlets, numbered respectively, No. 1, No. 2, No. 3, No. 4. Concord, N. H.: Republican Press Association.

As a result of prizes offered by Mr. Henry Lomb, of Rochester, N. Y., through the American Public Health Association, the following awards were made at the last meeting of the Association:

I. *Healthy Homes and Foods for the Working Classes.* By Victor C. Vaughan, M.D., Ph.D., Professor in University of Michigan. Prize, $200

II. *The Sanitary Conditions and Necessities of School-houses and School life.* By D. F. Lincoln, M. D., Boston, Mass. Prize, . . . $200

III. *Disinfection and Individual Prophylaxis against Infectious Diseases.* By George M. Sternberg, M.D., Major and Surgeon U. S. Army. Prize, ... $500

IV. *The Preventable Causes of Disease, Injury and Death in American Manufactories and Workshops, and the Best Means and Appliances for Preventing and Avoiding Them.* By George H. Ireland, Springfield, Mass. Prize, . $200

That these essays may be placed in the hands of every family in the country is the earnest desire of the Association, as well as the heartfelt wish of the public-spirited and philanthropic citizens, whose unpretentious generosity and unselfish devotion to the interests of humanity have given us these essays, but the financial inability of the Association renders it impossible to distribute them gratuitously—therefore, a price covering the cost has been placed upon these publications. It is to be hoped, however, that government departments, state and local boards of health, sanitary and benevolent associations, etc., will either publish these essays or purchase editions at cost of the Association, for distribution among the people.

Although a copyright has been placed upon these essays for legitimate protection, permission to publish, under certain conditions, can be obtained by addressing the Secretary.

Among five hundred persons, it is stated that we may expect to find a majority of average fools, a minority of modest mediocrities, a few able people, and—*if he lives*—perhaps one genius.

Editorial.

Dr. Gross' Autobiography.—Dr. Gross' Autobiography is a large work, he himself was a large man, was greatly distinguished, was of great age when he died, and his name implies unusual size. We think, under the circumstances, that we are excusable for devoting a considerable amount of space to his life, written by himself.

In the January issue of the Medical News, in speaking of Dr. Gross' Autobiography, we stated that we thought that it was greatly to be regretted that the editors, before issuing it, did not revise it and expunge the gross and unjust reflections upon many of the writer's contemporaries with whom he was brought in contact, and with many of whom he was associated—not a few (now dead) having been men of acknowledged talent, of high character, and greatly esteemed by all who knew them. Dr. Gross, throughout the work, consisting of two large volumes, as we said, makes very many unjust reflections upon, and misrepresents, not a few worthy professional men who were engaged in active duties at the time he was, whom he did not happen to like. Like himself, they are all now probably dead; and, although they can not have any feeling in consequence of being evilly spoken of, yet, in many instances, they have left very near friends behind who will feel greatly wounded in consequence of Dr. Gross' disparaging statements.

As we have informed our readers, Dr. Gross studied medicine at Easton, Pa., under the instruction of Dr. Joseph K. Swift. On page 56, Volume I., of the Autobiography, he thus describes the profession of Easton while he was a student there:

"The medical profession of Easton, at the period in question, was in a decidedly mediocre condition, without science, without learning, without progress, and apparently without ambition. Upon one thing all were agreed—they all bled, all gave emetics, all purged, all starved their patients. They were all real sangrados, mowing down alike the infant, the youth, the adult and the old man. Very few of them ever read a medical book. The remuneration for professional services was contemptible in the extreme. For a visit in town the ordinary charge was fifty cents, and double that sum for a ride into the country."

The physicians who were in practice in Easton at that

time and who did the professional work, we are informed, were, besides Dr. Joseph K. Swift, the preceptor of Dr. Gross, Drs. John Cooper, Samuel C. Gwinner and Stewart Kennedy. They are now all dead.

In the *Times*, of Philadelphia, of date January 15th, Prof. Traill Green, M.D., LL.D., a member of the faculty of Lafayette College, an institution of learning second to none in this country, and formerly President of the *Pennsylvania State Medical Society*, replied to the attack of Dr. Gross upon the medical profession of Easton as constituted at the time he was a student there, as we have been informed since writing our first article. We would be pleased, as we also know our readers would be, to copy the whole of Prof. Green's article, but want of space precludes our doing so. We will, however, clip from it his description of Dr. Swift:

"He was a pupil of Dr. John S. Dorsey, of the University of Pennsylvania, whose reputation as a surgeon is still remembered by the profession. Dr. Swift received his medical degree from the University of Pennsylvania in 1816, and soon after opened an office in Easton. The writer does not hesitate to say that Dr. Gross was indebted to him more than any other person for his success in life. Dr. Gross tells that he had been in the offices of two physicians before he became a pupil of Dr. Swift. It was reported here that Dr. Gross' natural good sense early discovered that he could not learn anything in these offices; that his preceptors knew nothing, and that he knew nothing himself. It was very evident that there was no school or academy in his neighborhood in which he could get an education which would qualify him to profit by the study of medicine. Conscious of his own ignorance, as well as that of his preceptors, he visited Dr. J. K. Swift for the purpose of receiving instruction from him. Dr. Swift said: 'Young man, you must prepare yourself by preliminary studies before you can study medicine. Go to school.' So he tells the story. He went to Joel and Samuel Jones' school in Wilkesbarre, afterward to Mr. Shea's classical school in New York City, and then to the Lawrenceville school in New Jersey. Under the instruction of the excellent teachers of these schools he obtained the training which prepared him to gain that eminence which he reached in his profession. He owes to Dr. Swift his opportunity for studying mineralogy, the pursuit of which opened to him the beauty of natural objects, and doubtless led to the study of other departments of natural

science. No one could be so intimately associated with Dr. Swift as he was, in the early years of his professional studies, without becoming enthusiastic in the study of mineralogy; and Dr. Gross says he imbibed a taste for it from Dr. Swift.

"It is interesting to read the story of the happy hours he spent at the quarry near Easton, and how he accumulated a beautiful collection of minerals. He says Swift 'was a practitioner of some note.' How does this agree with the remark (Autobiography, page 56) that Dr. Swift, who was one of 'the physicians of Easton,' was 'without science, without learning,' etc.? The doctor was very unhappy in his remark (page 27), 'a practitioner of note, with considerable pretension to scientific knowledge.' Of all the men Dr. Gross ever knew, it is not probable that there was one among them who made less pretension to knowledge he did not possess than did Dr. J. K. Swift. There was not a spark of the spirit of pretension in him. Dr. Swift's discoveries in mineralogy at Easton attracted the attention of mineralogists at home and in Europe. He carried on large exchanges with them and received visits from them. Mr. J. Finch, geologist and mineralogist, visited him in 1824, and gave a list of the minerals which are found near Easton. Mr. Finch says: 'They were all discovered by Dr. Swift, who resides here, and who has been indefatigable in his exertions to ascertain the minerals in his vicinity.' [Stillman's Journal, vol. 8, 1824.] Professor B. Stillman, Sr., visited him in May, 1830, on his way to Mauch Chunk. Referring to Easton, he writes: 'It has in its vicinity a fine serpentine formation, and the beautiful cabinet of Dr. Swift presents that mineral in distinct crystals; it is of the variety called noble serpentine, which appears thus clearly entitled to rank as a distinct mineral species. In Dr. Swift's well-selected and well-arranged collection there are splendid crystals of zircon, found in this vicinity, and the most crystallized mica in long prisms of six sides.' Mr. Nuttall, so distinguished as a naturalist, was one of the visitors, and others could be named did space allow. Dr. Swift certainly held an honorable position as a scientific man, and the correspondents of Dr. Gross were scientists whose names he received from Dr. Swift—his own correspondents (Autobiography, page 29); so largely was he assisted by his preceptor in his pursuit of science.

"Dr. Swift was a man of distinguished culture, a constant reader of literature and science. It is singular that he should

have been classed with the Easton physicians, 'without science and without learning'. (Autobiography, page 56), when on page 57 we read, 'he was undoubtedly a man of brains, with clear intellect;' early in life their little home was the resort of most of the prominent strangers who visited Easton on business or pleasure.' And it may be added that the most cultivated people of the town sought the society of the doctor and his wife to the end of life. It was never known, as remarked by Dr. Gross, that 'Dr. Swift possessed, as he imagined, a presumptive right to the best practice in the place;' nevertheless he was recognized as the best educated physician and surgeon of the town, and with Dr. Cooper, for many years, divided the largest and best practice of the town. His medical education, taste and mechanical skill would have made him one of the best surgeons of his time, had he been connected with a hospital. His introduction of adhesive plaster in making extension in fractures, has made him known wherever surgery is practiced.

"Dr. Gross's allusion to his poverty, as evidence of the want of success in his profession, is very unkind. (Autobiography, page 57.) He lost his property, as many others have, by giving his name as indorser on the paper of friends. As a highly cultivated scholar, a distinguished physician and surgeon, Dr. Swift is well remembered by the other citizens of Easton. The writer is happy to give a brief extract from a letter which he received a few days ago from an intelligent and well-known physician: 'Although I never knew Dr. Swift personally, I have always heard him spoken of as a man quite versed in the science of his time. I have quite a number of the minerals named by him and given to me in exchange; and what I have done in mineralogy was greatly the result of an awakening to the subject from hearing of Dr. Swift's success.'"

Prof. Green mentions Dr. Stewart Kennedy as another of the Easton physicians whom Dr. Gross speaks of as "unlearned," etc. He, Prof. Green states, graduated at the University of Pennsylvania. He enjoyed the confidence of the citizens, and had a large share of the practice of the town. He began practice in 1820, and continued it until 1841, when he retired and purchased a large farm near Chambersburg, Pa., out of the savings of the "contemptible" fees he had been charging his clients, as described by Dr. Gross. In those days, in Easton, beef sold for six cents a

pound, butter ten cents, eggs six cents a dozen. Fifty cents a visit, in those days, was equal to two dollars a visit at the present time, when the purchasing capacity is considered. Prof. Green, in speaking of the other physicians of Easton, shows that they were more than mediocre.

Although it occupies considerable space, yet we feel confident our readers will approve, on account of its exceeding interest, the extract we make from Prof. Green's article in reply to Dr. Gross' gross statement that the profession of Easton, in the days of his studentship, mowed down alike, by bleeding, "the infant, the youth, the adult, and the old man."

"It only remains to speak of 'the mowing down alike of the infant, the youth, the adult and the old man' by bloodletting. The writer thinks it can be said of the physicians named above that they were skillful, and men of good judgment. The 'killing and mowing down' are terms used very loosely and very frequently. Dr. Cooper, in his last sickness, said to two of the physicians of Easton: 'I was never charged with killing more than three of my patients by blood-letting. Two of these are still living, and one died ten years after the operation from want of bleeding.' Such killing has been done very frequently. Dr. Gross did not believe in any other kind, and surely did not fear that bleeding would kill aged and feeble persons, for he writes: 'A tall, slender gentleman of this city, nearly eighty years of age, in which a severe attack of asthma was complicated with great congestion and slight inflammation of the lungs, the abstraction of less than six ounces of blood by the lancet led to speedy convalescence and to a complete cure I verily believe that if this gentleman had not been bled he would have died. In certain forms of phthisis (consumption), venesection, judiciously employed, is frequently productive of great benefit. I remember the case of the late Mr. Benjamin Drake, of Cincinnati, who labored for many years under diseases of the lungs, associated with tubercular deposits, the more urgent symptoms of which were always promptly relieved by the loss of eight to sixteen ounces of blood by venesection. I have always felt satisfied that his life was materially prolonged by this treatment. Dr. Rush was in the habit, as Sydenham had been before him, of bleeding in every case of phthisis attended with a hard pulse, or a pulse rendered weak by the laborious transmission of blood through the lungs. In one of his cases he bled eight-

een times in two weeks, and in another fifteen times in six weeks, with the happiest effects.' Dr. Gross says he 'cites these instances to show that a system borne down by disease may react favorably under what, to us of the present day, appears as a most heroic measure.' [Dr. Gross. A Discourse on Blood-letting. Journal of the American Medical Association; vol. 26, 1875, page 433.]

"Of the frequent bleeding of women he says: 'I do not know that I ever heard of one that was injured by the practice.' [Ibid, page 434.] The young man whom he attended, with Dr. Charles Woodward, of Cincinnati, they bled on three successive days, and at the first bleeding they took 'nearly a quart of blood.' The quantity taken on the following days is not given. [Ibid, 431.] It is not probable that Dr. Sangrado bled more freely.

"'But I shall be told that such heroic treatment must inevitably induce serious debility. I grant it will; but, in turn, I ask, Will the disease, if neglected or permitted to progress, not also cause debility—debility perhaps of the very worst kind, debility from overaction of the heart, imperfect supply of nerve fluid, deranged circulation, impaired function of vital organs, and above all, from disordered structure from inflammatory deposits? The enlightened practitioner bleeds to save tissue and to prevent the morbid action from running riot. He repairs strength, when the time for it arrives, by making blood with nutritious food and drink, and thus speedily sets the machinery of life again in motion. The timid, hesitating practitioner, the opponent of bleeding, on the contrary, although he may employ the same restoratives, uses them inopportunely, and thus allows the debility caused by his treatment to linger for an indefinite time, provided the patient is so fortunate as to survive the first onslaught of his disease.' [Ibid, 429.]

"Dr. Gross also wrote [Ibid, p. 432]: 'But bleeding should not be restricted to the treatment of inflammatory diseases. There are other affections in which it may often be practiced with the greatest benefit.' He refers to convulsions, asthma and phthisis. [Ibid, p. 432.] He says: 'Blood-letting is emphatically one of the lost arts of the profession.' [P. 421, 422.]

"Dr. Gross deserves great praise for his advocacy of blood-letting, and the medical profession will thank him for the good words he uttered again and again in commendation of it. His prediction will doubtless come to pass: 'Bleeding

will again come into fashion. And although I am not a prophet, nor the son of a prophet, I venture to predict that the day is near at hand, if, indeed, it has not already arrived, when this important element of treatment, so long and so shamefully neglected, will again become a recognized therapeutic agent and will thus be instrumental in saving many lives, as well as many an eye, many a lung, many a joint and many a limb.' [Ibid, page 431.] Is it not strange that one who so practiced blood-letting, and who so earnestly recommended it, could so hastily condemn the men of Easton of 1830–1833, who with good judgment practiced as wisely as he did? The writer can not forget how two free bleedings by Dr. Cooper in his own Easton home, in an attack of pleuro-pneumonia, in which he attended him in youth, brought him speedy relief and left his lungs in good condition. What results did they obtain? Prof. J. William White, of the University of Pennsylvania, in his article, 'A Century of Medicine,' says that during one of the epidemics of yellow fever, near the close of the last century, 'Dr. Rush bled Dr. Griffith seven times in five days, and the latter lived for many years—until June, 1826.' In the treatment of inflammation of the organs of the chest, Dr. White remarks: 'As a matter of fact their results were not bad. The proportion of recoveries in such cases compared very favorably with those of earlier times of which we have any knowledge, and not unfavorably with the statistics of many modern practitioners.'

"It is seen from the writings and practice of Dr. Gross that he bled persons, 'slender and nearly eighty years of age;' consumptives, to the amount of eight to sixteen ounces of blood; that he refers to the practice of Sydenham and Rush, who bled consumptives freely and frequently, 'with the happiest effects;' of the frequent bleeding of women, so common for a time, he says: 'I do not know that I ever heard of one that was injured by the practice;' he commended it in inflammatory and non-inflammatory diseases, in the young and aged. When has the most ardent advocate of blood-letting ever asked more than Dr. Gross taught as to blood-letting? The writer does not notice other remarks of Dr. Gross, 'jealous,' 'unsociable,' etc., as professional defects were the serious charges.

"The writer can not reconcile Dr. Gross' charges of ignorance with his advice to a young medical student against obtaining a good education. In a review of the autobi-

ography of Dr. Gross in the *American Journal of the Medical Sciences*, October, 1887, p. 481, we read: 'That the classical training which he experienced during these two years was of incalculable service to him, no one who is familiar with his writings can doubt; and yet it is due to the truth of his history to tell, what is not mentioned in his diary, that when, in 1845, a pupil in his office became the subject of similar convictions, and consulted him as to the propriety of resorting to Transylvania University, a noted classical institution at Lexington, Kentucky, he advised against the scheme. We have authority for saying that the pupil alluded to has never ceased to regret his acceptance of the advice. In fact, it would seem from an entry made July 18, 1883, that his early opinion as to the necessity and special advantage of the acquirement of the dead languages preliminary to the study of medicine, or any other profession save theology, underwent some modification. This is not the place to discuss the question, but we may be allowed to express the hope that the views of Charles Francis Adams, Jr., have not been, and may never be, generally received with favor, even within the precincts of Harvard University.'

"The medical practice of the period criticised by Dr. Gross was not peculiar to Easton, but prevailed everywhere, and was his as well. TRAILL GREEN, M.D."

THE IMMORTALITY OF THE SOUL.—Prof. Thad. A. Reamy, M.D., of the Medical College of Ohio, on a Sunday evening recently, delivered a lecture before the congregation of St. Paul's Methodist Episcopal Church on the "Immortality of the Soul." The auditorium, we understand, was crowded to overflowing; as many, no doubt, hoped that the lecturer, being a gentleman versed in medical science, would be able to disclose something upon the subject not known before. We confess that we, when we read the announcement in the public papers that the Doctor would deliver such an address, felt that it might be that, in his researches, he had developed some new knowledge; and, consequently, became exceedingly anxious, if it were so, to learn the nature of it. As we were not able to attend the lecture, we read the report of it in the papers of the following morning with great avidity, hoping that, as we perused the lines, facts would be unfolded to our mind we had never known before. But when we reached the end of the report, we somewhat

sadly laid down the paper, feeling that we knew no more about the immortality of the soul, after finishing the reading of the report, than we did before we began it.

The Doctor, in his discourse, we admit, said quite a number of good things. For instance, he stated that it was seldom justifiable for a man to attempt to run two professions that demanded as much attention as the medical and ministerial. We agree with him in this declaration heartily. The man who attempts to be both a doctor and preacher, in our opinion, will be found to be both a poor doctor and a poor preacher; in fact, such an individual is usually both a quack and a scoundrel. Still, as Dr. Reamy asserted, we believe there exists a kind of affinity between the physician and minister, so that he can not be considered as filling all the requirements of a conscientious physician who regards only the physical part of his profession; for the doctor is also so often brought into close contact with the spiritual [mental and emotional.—ED.] nature, and sees many things not ordinarily revealed to the material, but leaving a marked impression upon the "*eye of faith.*" The medical man undoubtedly has many things disclosed to him which are not seen by the eyes of other men. The Doctor's implication, however, that a physician has one kind of an eye and other people another kind of an eye, we are not prepared to assent to. The physician's business brings him often into such close contact with his fellow-men that he sees many follies and weak points in them that are not seen by others; but whatever he sees, he sees with a material eye, and not with an "eye of faith."

The third point, in regard to which we agree with Dr. Reamy, is, that "there is nothing in the study of medicine that conduces to atheism or infidelity." Certainly not. The more thoroughly anatomy, and physiology, and reproduction, and other branches of knowledge belonging to the study of medicine, are studied, the more certainly is it demonstrated to every intelligent person that a Supreme Being created man—the more certain it is that man did not come into existence by chance, that he is not the product of evolution, but that he came from the hands of an intelligent Creator, who, after he had formed him, breathed into him the breath of life, and he became a living being. Man's wonderful, marvelous mechanism, the great complexity of his organism—possessing, as he does, many organs, every one of which, although it has distinct functions, yet it is so

intimately connected and dependent upon all the others, that the operations of the least honorable one are absolutely essential for the integrity of all the others—yea, everything involved in the structure of man makes it folly to ascribe his existence to any other power than that of a Divine Being. We agree, therefore, with Dr. Reamy that "there is nothing in the study of medicine that conduces to atheism or infidelity."

But we do not assent to the following assertion of the Doctor: "Surely, there is no one of so little understanding as not to know that man is a dual being, having a body and spirit. The spirit is a tenant of the body, as the brain is the vehicle of the emotions." Of so little understanding as not to know, etc. Why, how did he come to know it? What evidence can he produce that man is a "dual being"? If he has knowledge that a man has an earthy part that returns to the earth, and a *spiritual part* that is immortal, he obtained the knowledge by *revelation* and not by his understanding. There was no definite knowledge in the world in regard to immortality until it was proclaimed by Christ. The Rev. Dr. Watts, the great hymn composer, and other theological writers, say that the Jews of the Old Testament had very indistinct notions about immortality. Cicero's ideas, notwithstanding what he says in his "Dream of Scipio" and in his "De Amicitia," were very clouded, and were gotten from the Greeks, whose conceptions were faint, and had only entered the minds of very few.

Prof. Reamy, in his lecture, evidently took it for granted that the mind and the emotions (but the emotions are a department of the mind) constitute the soul of man—the part that is to live forever. Now physiology and pathology demonstrate quite conclusively that the mind, the intellectual part of man, emanates from the brain of man as a force. In a battery, when certain conditions are fulfilled, the zinc plate and the copper plate are present, and the glass jar containing them is filled with an appropriate solution, the poles being connected by a wire—a current of electricity begins to flow. The electricity is not visible, and has no weight or form, but it exerts great powers, and so we call it a force. When oxygen and carbon rapidly combine, heat is engendered. It, like electricity, is not visible, has neither weight nor form, but it exerts great powers, and so we call it a force. These forces exist under certain conditions. When the conditions cease, they cease. We find

similar phenomena as regards the intellectual powers or forces. When there is a large brain, with all the conditions essential for its perfect nutrition present, etc., we witness great intelligence. When the brain is below a certain size, and the conditions are wanting for the perfect performance of its functions, there exists imbecility or idiocy. In the case of a healthy adult, who has always manifested great intelligence, if he at one time is made to breathe certain gases, so that the circulation is disturbed, mental phenomena are disturbed. If he inhales an excess of oxygen gas, the blood becomes too highly oxygenated, and he becomes delirious. If a portion of bone of the skull is made to press upon the brain substance, all intelligence ceases, etc. But we have not the time or space to further illustrate.

When Dr. Reamy or any other person declares that the mind, which involves the emotive functions or forces, or in other words, the feelings, is the soul or immortal part of man, he does so without authority and in contradiction of the facts of science. The lower animals have intelligence and feelings, though in much less degree. And again the mind of man, like his body, is constantly undergoing change, which fact shows it to be of material origin. No man forty years of age has the same mind that he had when he was fifteen years of age.

The only element in a man that is with him throughout life—that is with him when he is five years old and when he is seventy-five years old—is the "Ego." This is the element, if we may term it an element, by which he knows when he is sixty years old that he is the identical individual who did a certain act when he was fifteen years old; by which he knows, if punishment is to be inflicted for an act, after the lapse of years, that he is the one that did it.

The New Testament teaches, and we, being a Christian, of course believe it, though we know that our Jewish subscribers do not, that at the last day the bodies of the dead shall rise and be like Christ's glorious body. There is evidence, we admit, in the same book to the effect that there is a principle in us that does not die when the body dies. But there is no evidence that it is the mind. It will be said that Moses and Elias, when they appeared, spoke and evidently exhibited intelligence, but it could not have been their earthly minds that exhibited the intelligence, for their source was as earthy as the movements of their muscles when they lived.

Dr. Reamy closed his lecture with the following words: "Nothing is destroyed, speaks the eternal voice of Science; and if God has decreed that no portion of the inferior part of man shall be destroyed, how shall we for a moment think that in his wisdom he would allow the soul to be annihilated?"

To all this we subscribe; but, if we use the testimony of science on the one hand, we must on the other. Now science plainly teaches that the mind and feelings in man, as in the dog and in the elephant, have their source in the brain, just as electricity has its source in the battery from which it emanates; and, teaching thus, we must believe it or reject its testimony altogether.

Dr. William H. Taylor was announced by the pastor to deliver a lecture before his congregation on the next Sunday evening. We hope he will be able to increase the knowledge of his audience.

PUBLIC WEALTH VS. PUBLIC HEALTH.—The *Journal*, of Chicago, says that less than a month ago a notice appeared in the obituary columns of the daily papers of Chicago, showing that on February 3, 6 and 15, the three children of a family had died of diphtheria in Chicago, their ages being six, three and one years respectively. But this announcement, the *Journal* says, caused no commotion or public talk in the city and certainly none in the State. The matter was not brought before Congress, nor was there a meeting of State Governors to discuss the matter. It does not appear that the family was quarantined, nor that any investigation was made of the origin of this outbreak of diphtheria.

The *Journal*, in the way of exhibiting the great difference of actions of men under different circumstances—how that sometimes the least important will excite more feeling than the most important; how that selfish motives oftentimes arouse human beings to more vigorous action than do the higher and nobler sensibilities of love and sympathy for one another—proceeds to state that about two years ago some one discovered that a cow somewhere down in the State of Illinois had pleuro-pneumonia—at any rate it had a lump on its under jaw. There was immediately a great commotion in the State and in adjoining and distant States. Telegrams were sent to Washington; and Congress made haste to pass a bill creating a new official with a salary, and added him to the Department of the Interior, making this

new official a sort of Bureau of Animal Industries; and more than this, the business of the cattle-drovers at the Chicago Stockyards was temporarily paralyzed in order to see if some other cows might not take pleuro-pneumonia from the one cow. An embargo was laid on cattle from the place where the cow with the swollen jaw was found. The Bureau of Animal Industries seems to have gone out of existence; and it was probably forgotten until a short time ago, when it was found that the embargo laid in 1886 has not been removed.

"Cattle," says the *Journal*, "are valuable animals, and it is very important that, since we use them for food, they be kept free from disease as possible. But are they more valuable than children? Is it more important that cattle be kept healthy and free from preventable diseases than children? One diseased cow, it may be said, may cause disease to many human beings. The same may be said of one sick child, with an infectious disease. But cattle are worth money, and their loss is a positive pecuniary loss to the owner. The same, and to a very much greater extent, is true of children."

American Medical Association—Programme for the Meeting of the Physicians of the Country.—The assembly of this great national body of physicians in this city May 8, will be one of the great features of the Centennial assemblages. Following is the programme of its general meetings, to be held in Music Hall and the sectional meetings in adjoining rooms in the same building:

First Day.—Meeting called to order by Dr. W. W. Dawson, Chairman of the Committee of Arrangements; prayer; address of welcome; announcement of programme of entire session; annual address by President A. Y. P. Garnett, of Washington; call for volunteer papers and their appropriate reference; new and miscellaneous business; notification of the appointment of the Nominating Committee.

Second Day.—Report of Committee of Arrangements; address on "General Medicine," by Prof. Roberts Bartholow, of Philadelphia; annual report of the Board of Trustees, by S. M. Toner, M.D., Chairman; report of Special Committee on Dietetics; consideration of proposed amendments to the Constitution; announcement of Nominating Committee.

Third Day.—Report of Committee of Arrangements; address on "General Surgery," by E. M. Moore, M.D.,

of Rochester; report of Committee on Rush Monument, by A. L. Gihon, M.D., Chairman; report of Treasurer, R. J. Dunglison, M.D.; report of Librarian, C. H. A. Kleinschmidt, M.D.; report of Committee on Necrology, by J. M. Toner, M. D., Chairman.

Fourth Day.—Report of Committee of Arrangements; address on State Medicine, by H. P. Walcott, M.D., of Boston; final report of Nominating Committee; report of Standing Committee on Meteorological Conditions, by N. S. Davis, M.D., Chairman; report of Special Committee on Criminality of Fœticide and Measures for Its Prevention; report of Special Committee on Duties commonly exercised by Coroners; reports of Secretaries of Sections; new and miscellaneous business.

The Sections will meet each afternoon at three o'clock.

The Next Meeting of the Association of American Medical Editors.—The following programme has been arranged for the meeting at Cincinnati, Monday evening preceding the meeting of the American Medical Association, May, 1888:

Meeting called at 8 P.M.

Reading of minutes.

President's address, Dr. William Porter, of St. Louis.

Report of Committee on Organization, Dr. McMurtry, Chairman, Danville, Ky.

Election of Officers for ensuing year.

Extraordinary business.

Questions for consideration.

1. Is the multiplicity of medical journals an advantage to the profession? To be discussed by Drs. Crothers, Hartford; Sim, Memphis; Wile, Connecticut; Love, St. Louis; Culbertson, Cincinnati; Cushing, Boston; Coomes, Louisville, and Gray, Chicago.

2. How far do medical journals distributed by drug houses and manufacturers interfere with regular medical journalism? To be discussed by Drs. Reynolds, Louisville; Davis, Chicago; Shoemaker, Philadelphia; Bond, St. Louis; Connor, Detroit; Kiernan, Chicago; Thacker, Cincinnati, and Fulton, St. Paul.

Members are requested to limit their remarks to fifteen minutes, and if possible to ten. The place of meeting will be posted in all the hotels by the local committee.

Arrangements can be made at this meeting for a "press

dinner" for another evening during the week, but it will be impossible to conclude the business of the Association and have the dinner the same evening.

DECEASE OF DR. WALTER A. DUN.—At the Alumni Meeting of the Miami Medical College, the following action was taken on the death of Dr. Walter A. Dun:

IN MEMORIAM.

ALUMNI ASS. MIAMI MEDICAL COLLEGE,
ANNUAL MEETING, March 9, 1888.

Dr. Walter A. Dun, one of the officers and active members of this Association, is absent to-day through death. He was known as one of the prominent, unselfish, hard-working young men of his profession. He was always at the front in any movement of a scientific or philanthropic character that meant progress. To us his death seems untimely.

In token of our appreciation of his excellent qualities, we will spread this report upon the Journal of the Association, and send it to the local medical journals for publication.

EDWARD S. STEVENS, M.D.,
JAMES D. GATCH, M.D.,
C. R. HOLMES, M.D.,
Committee.

AN ANTI-SYPHILITIC AND ANTI-RHEUMATIC.—Some years ago a considerable ripple was created in medical circles by the announcement, by Dr. J. Marion Sims, of the remarkable results attained in the treatment of syphilis by a combination of vegetable remedies first used by Dr. McDade at the South. This preparation, known as SUCCUS ALTERANS (MCDADE), is a purely vegetable compound of the preserved juices of stillingia sylvatica, lappa minor, phytolacca decandra, smilax sarsaparilla and xanthoxylum fraxineum, and has largely displaced mercury and the iodides as anti-syphilitics and as an alterative tonic in the myriad forms of scrofulous disease. Under its use patients develop an appetite and frequently put on flesh rapidly; in these all-important respects differing widely from the effects of mercurialization and iodism, which all too frequently follow the use of the more heroic but less effective alteratives. Succus Alterans is also becoming a very popular remedy with the profession and being very extensively prescribed in the treatment of rheumatism, of chronic character especially. As no great claims

have ever been made for it in this respect, but it has simply been placed upon its own merit, we think therefore it could possess no higher commendation.—*Mass. Med. Journal.*

The Great Centennial Exposition.—The Commissioners are busy day and night with preparations for the great Centennial Exposition, which opens in Cincinnati July 4th. The enthusiasm in regard to it is constantly increasing. It will be superior to anything of the kind ever held in this country. To be convinced of this, it is only necessary to visit the buildings, which are now nearly completed. There are quite a number of them. One, a very long one, spans the canal, on which boats, gayly decked, will be constantly sailing. This will form a novel feature at night, when the water will be lighted by many electric lights. To physicians the Exposition will be especially interesting in consequence of the very large display of scientific apparatus, surgical and medical instruments, instruments of precision, etc.

To witness such an exposition as the one that will be held in Cincinnati the coming summer, only one opportunity in a lifetime will be afforded an individual, so that this opportunity should be embraced by all who can possibly do so.

Portraits of Eminent Medical Men.—When we enter a physician's office we like to see displayed upon the walls the pictures of eminent physicians and surgeons. If he can have other pictures in addition, all the better; but he should have a few portraits, at least, of distinguished men of his profession.

Messrs. Parke, Davis & Co., of Detroit, Mich., at considerable expense, have had issued the portraits of a number of very eminent physicians, which, we understand, are excellent likenesses of those they represent. They have kindly favored us with several, which we regard as very fine indeed, viz.: Dr. Robert Koch, the eminent microscopist, of tubercular bacilli fame, and Sir Morell Mackenzie, of Crown Prince fame.

Any of our subscribers who wish either or both of these portraits, Parke, Davis & Co. will mail them to them without charge, by addressing them.

Meeting of the American Medical Association.—The *American Lancet* delivers itself as follows: "The next meeting of the *American Medical Association* will be held in Cin-

cinnati, beginning May 8, and continuing four days. This will unquestionably be the most successful meeting ever held by the Association. Forgetting the past, may every one who loves professional unity and general prosperity be present to contribute his portion toward the certain advance."

Requirements in Norway.—In Norway, if in no other country, the medical profession is entitled to be called a learned profession. Medical students, in that country, must spend two years in the University at Christiana before they can enter upon the study of medicine. Among the studies required are Latin, mathematics, philosophy, logic, and some of the natural sciences. Then he must spend six years in purely medical study. It is not strange, therefore, that there are in Norway but 520 physicians. The majority of these are in some official position.

To Locate the Body of a Man Drowned at Abbeyville, Ga.—An old negro, says the Albany *Medical Annals*, put a bundle of straw in the river where the man first sank. It floated down about fifty yards and suddenly stopped, and commenced to whirl round and round. Here the old negro dived and secured the body. He claims to have secured four or five bodies in the same way.

Label Paste.—Rye flour, four ounces; water, one pint; nitric acid, one drachm; carbolic acid, ten minims; oil of cloves, ten minims; glycerine, one ounce. Mix the flour and water, strain through a cloth, and add the nitric acid. Apply heat until suitably thickened, and add the other ingredients when cooling. This paste can be used for labeling bottles, tin or wooden boxes, and will not spoil.

Eli Lilly & Co., of Indianapolis, are one of the enterprising manufacturing drug firms of the West. They manufacture a complete line of officinal preparations, and many that are not officinal, but often prescribed by physicians. Subscribers should observe their advertisement. They issue, in neat pamphlet form, a catalogue of all the preparations which they manufacture—officinal sugar-coated pills, tinctures, etc.—with prices, which they will send to all, without charge, who request it. It is very convenient to have one of these catalogues for reference. Their preparations can be depended upon to be as represented.

THE
CINCINNATI MEDICAL NEWS.

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Original Contributions.

Dr. Gross' Autobiography.

To the Editor of the CINCINNATI MEDICAL NEWS:

I READ with much interest your editorial in the February number on Dr. S. D. Gross' Autobiography; in particular your remarks on the relative merits of Prof. Gross and Prof. Mussey, as surgical operators. It was my good fortune to have these distinguished surgeons as my teachers in surgery; the former at the Medical University of New York, and the latter at the Ohio Medical College, and I have seen both perform a number of operations. Of course, I was forcibly impressed with the skill and merit of both operators. A notable difference I observed in the hands of the two. Mussey had a small, beautiful hand, and he manipulated his surgical implements with remarkable grace; but not with special nerve firmness. Gross had a large, bony hand, and handled his knife with vigor and firmness. The physiognomy of these men in operating was quite a study. Mussey betrayed some anxiety, apparently feeling the weight of his responsibility over the case; but there was no change of color in his face. With Gross there was a slight flush in the face, betraying the emotion of doing a painful duty, but void of all embarrassment. Mussey was always intensely serious in an operation, whereas a smile would betray the satisfaction of Gross at the close of a capital operation. Both were of excellent moral character. The fine, delicate sense of Mussey, I believe, could not be surpassed. I pass this judgment from observing him under many different circumstances, socially as a guest, as a teacher, and as a surgeon.

I saw him amputate a limb, appearing perfectly self-contained, but after the operation he heard a tale of woe of the patient's family with tears in his eyes.

The pluck and industry of these two great men were remarkable, but not of the same nature. Gross worked for a great storehouse of knowledge, to be made available both by pen and knife. Mussey was a specialist and would hardly go outside of his appropriate line of duty. The cure of an intracapsular fracture of the neck of the femur, shows out and out the man. To afford himself the clearest knowledge of his cure, he secured a legal lien on the man's leg, and after twenty-five years, when the man's death occurred in New England, Dr. Mussey went the long distance to the home of his patient, made *post-mortem* examination and secured the leg. This wonderful specimen he exhibited to many of the most distinguished surgeons of Europe, whose teachings were that such a cure could never be effected. He labored to establish a great point in surgery, not because he effected a wonderful cure in a supposed incurable injury, but the fight was for truth and science. Gross, and hardly any other man, would have gone through all this trouble. Gross would doubtless have deemed it sufficient to make correction of error in his work on surgery.

I remember but very little of the gift of prescribing in Mussey's teaching and practice. Gross prescribed medicine with confidence, and his prescriptions show that he was as great a prescriptionist as a surgeon.

Mussey had his hobbies. His horror of meat was one of them. At one time he carried this folly to such an extent, that he tried to get along, not only without meat, but without all animal products, as butter, milk, eggs, etc. A little chemical phsiology might have taught him how it would result. He got so weak and tottering, that he could hardly walk. I think much of his tremulousness, *occasionally* seen in his operations*, was more for want of animal nourishment then from any mental excitement.

The last time I came in contact with these two great men,

*The *tremulousness* of Dr. Mussey was not only present when he operated, but was present at all times and under all circumstances, whether he was operating or not. It was as great as we have ever observed in the worst cases of paralysis agitans of old age, and yet he never shrank from performing the most delicate operations, as those of the eye, etc. We never observed it to be the slightest increased while operating. He was too accustomed to operating to be disturbed by *mental excitement* when thus engaged.—ED.

the occasions were connected with the same subject—stricture of the urethra.

In 1858 I had in Springfield, O., a case of stricture of the urethra with urinary fistula. I could secure no passage into the bladder. I sent for Mussey for aid and advice. He came, and likewise failed to get any instrument through the urethra, and wisely declined to operate, owing to the extent of the inflammatory action of the parts. Afterward he sent me several attenuated sounds, to be used in the case, but none were used with success. I had instructions to secure a passage into the bladder, to allay the inflammation, and he was to come and perform the final operation. About that time I was considerably interested in resorting to atmospheric pressure as a local absorbent.* [See notes at end of article.] In this case I conceived the idea of affecting a gradual dilatation of the stricture by atmospheric pressure. I filled a large beef's bladder with air, secured to a canula of about three inches long. The canula was introduced into the penis, and sufficiently held in place by a bandage. The air in the bladder had been secured by a string, which was cut away after adjustment, allowing the air to rush up against the object of resistance. The patient was kept lying on his side, and a slight constant pressure was made on the beef's bladder. This pressure was maintained for a week, day and night, except during the time of uresis, without any attempt to disturb the stricture with any instrument. At the end of the week I took a small flexible catheter, and with no resistance, except what the sphincter would naturally produce, it slipped into the bladder. At this interesting period of the case the patient changed doctors. My successor cut down into the bladder, regardless of Mussey's prognostic fears, and in a few days the patient died from urinary infiltration.

I would here suggest, that a weak solution of sedatives and anæsthetics, with which the air in the bladder could be impregnated, might prove a valuable application in nearly all painful diseases of the urethra, uterus, rectum, as well as the ear. Antiseptics, alteratives, stimulants, etc., could be applied in like manner, and even some the gases alone can be used in this way; for example, oxygen in strumous otorrhœa, and some forms of deafness, etc. There is a large field for experimentation by this method of medication, and no doubt with many fine results.

My last interview with Prof. Gross was in 1862, in Phila-

delphia, on my way to the seat of war. I happened to meet him on Chestnut Street, on his way to college to meet his class. He gave me a cordial greeting, and with a touch of youthful gladsomeness in manner and voice, invited me to go with him to hear him on the subject of stricture of the urethra. In our walk to college we had an animated conversation on our operations of amputation at the hip-joint, for each had but a short time previously performed the same operation, but by different methods and with different results.

I shall ever remember the last lecture I heard from him, which was highly instructive, and delivered in a earnest, pleasant style, and I thought was a great improvement on those given ten years before in New York. After the lecture, on our way to his office, I referred to the case I had with Prof. Mussey, and the manner of securing an opening into the bladder. I was somewhat amused for a moment to see his look of astonishment. "Ah, I see!" he finally answered, without saying more about it. It would be a source of satisfaction to me, if I could put here on record the full meaning of his laconic reply.

G. P. HACHENBERG, M.D.

AUSTIN, Texas.

* "On the Relation of Atmospheric Air to the Human Body." Vide: *Western Lancet*, October, 1854.

"Atmospheric Pressure to the Scrotum." Vide: Proceedings of the National Medical Association for 1854.

"Gleet Treated by Atmospheric Pressure." Vide: *N. A. Med. and Chirurgical Review* for 1880, edited by Prof. S. D. Gross.

Baltimore Academy of Medicine.

Reported for the CINCINNATI MEDICAL NEWS.

DR. JAMES CAREY THOMAS in the chair.

REPORT OF A CASE OF DOUBLE ANEURISM OF THE ASCENDING AORTA.

Dr. Thomas F. Murdoch reported the following: On February 13th, at 8 P. M., he was summoned to see Mr. B., and found him complaining of nausea, great pain in the epigastric region, very sensitive to pressure, eructating great quantities of wind and his heart beating tumultuously, so

that it was impossible to hear the sounds of the heart to determine if there was any disease of the valves. The patient informed him that he had dinner at three o'clock at a restaurant, consisting of a beefsteak and a potato, and shortly afterward was seized with nausea, pain in the stomach, and tumultuous action of his heart, which obliged him to go home, but did not send for Dr. Murdoch until the hour above named. He prescribed an anti-pasmodic mixture, and after taking two doses, he left the patient somewhat relieved and ordered a dose of castor oil to be taken in the morning. Would have given him an emetic, but he informed Dr. Murdoch that he was never able to vomit. Called at 1 A. M., the 14th, still suffering, ordered an enema, and at his own suggestion gave him half a tumbler of Hunyadi water. The enema brought away some hardened fæces, and, at the same time, he *did* vomit some fluid, but nothing that he had eaten. He expressed himself as feeling much better than he had done since he was first taken. Remained with him until 4 A. M., and left him comfortable, although his heart was acting tumultuously. Called again at 7:30 A. M. Prescribed—

℞. Tr. digitalis, . . . ℥ i.
Morphia sulph., . . gr. i.
Aqua camphora, . . ℥ ij.

Sig.—Teaspoonful every two hours.

Of this he took one dose.

Dr. Salzer met Dr. Murdoch in consultation at 9 A. M. Dr. Salzer had attended Mr. B. last summer at Bedford Springs. He agreed with Dr. Murdoch that the action of his heart was sympathetic, and informed him that he had frequently examined his heart and also his urine, and he was *certain* there was no disease of either heart or kidneys. Had treated him for gastric trouble. After much consideration they determined to give him twenty grs. of ipecac in compressed pills; *this*, instead of vomiting him, had the most soothing effect, and he got some sleep, the first he had had. After fifteen minutes, repeated the ipecac and he slept for nearly two hours, waking occasionally. Dr. Salzer left at 11:30, considering him much better. Dr. Murdoch remained until 12:30, thinking he could leave him for an hour or so, but had not been away more than thirty minutes when the patient expired suddenly.

Report of autopsy made on the body of Mr. B.:

February 15th, 10 A. M., twenty hours after death. Body of medium size, slightly built. Rigor mortis well marked. On the right upper arm, about one and a half inches below the head of the humerus, was depressed stellate cicatrix, and on the anterior aspect of the body between the cartilages of the second and third ribs and one-half inch to the right of the sternum was a similar cicatrix. Left lung free from adhesions. Its tissue œdematous. The right lung firmly united to the chest-wall by old adhesions. Its tissue œdematous.

In the left pleural cavity about one ounce of clear serum. The entire heart was enlarged, both ventricles, especially the left, somewhat dilated. The wall of left ventricle slightly thickened. The muscular tissue of heart flabby. All the valves of the heart were normal. The aorta atheromatous in its entire extent. In the aorta, just above the aortic valves, were two aneurisms, one opening in the sinus of Valsalva behind the right anterior valve, and one behind the posterior valve. The one to the right was the size of a black walnut, its opening into the aorta about three-fourths of an inch in diameter. The aneurism opening behind the posterior valve was not larger than a small hazel-nut.

In the wall of the right auricle there was an area about one inch in diameter where the wall was thin anæmic, and in the middle of this a ragged opening, the size of a No. 14 catheter, which passed directly into the larger aneurism. Both aneurisms contained red coagula.

Liver, kidneys and spleen congested. In the abdominal cavity about three per cent. of clear serum.

W. T. COUNCILMAN, M.D.

DISCUSSION.

Dr. T. A. Ashby said that through the courtesy of the attending physicians he had witnessed the autopsy in the case reported by Dr. Murdoch. He had known this gentleman for a number of years, and was as much surprised as were his medical attendants at his sudden death. He had never attended the gentleman professionally, and therefore had never examined his heart, but was aware of the fact that he was a frequent sufferer from attacks of indigestion which gave him much uneasiness and distress. At times he complained to his family of thoracic pains and of dyspnœa after exercise. He also complained of palpitation and of

frequent action of the heart. The valves of the heart were normal, and there were no physical signs present pointing to cardiac trouble. His medical attendants were therefore correct in assuming that illness was not referable to circulatory changes. The cause of sudden death was explained by the rupture of the aneurismal sac. In his judgment the disturbance of the circulation was primarily induced by the retching and vomiting, which induced sufficient pressure upon the already weakened aortic sac as to occasion rupture and sudden death. It is probable that rupture was in this wise hastened, but it would in all probability have occurred at an early date from mere attenuation, or physical exercise, had not the attack of indigestion occurred. Changes in the aorta had evidently been going on for some time, though no means of determining this fact were presented to his medical attendants. In the light of present circumstances it was easy enough to construct a theory and establish a chain of evidence which would explain a result, but in dealing with conditions we were guided by facts in view and not by suppositions which only became clear after they are obtained from positive information. It was easy enough now to account for the presence of a condition, since it had been discovered by *post-mortem* evidence, but this information was not possible before death. The treatment of the case was rational, and not open to criticism. Who could have done better? This is a practical question to which each one must give a candid answer.

Dr. James Carey Thomas thought it was an extremely interesting case. He asked if atheroma could be diagnosticated when not far advanced. He also spoke of venous engorgement which occurred in such cases.

Dr. John R. Uhler thought there was much room for improvement in the study of heart diseases. If the physics of ausculation were better understood and more thoroughly studied, we might be better able to understand obscure cases. He referred to a similar case in his own practice. He was called to see a man one morning at nine, and found him with a pain in the chest, and unable to lie down. The patient died at 9 P. M. the same day with a sharp pain at the center of the sternum. A diagnosis during life had not been made. The autopsy showed an aneurism which had burst in the mediastinum. The aneurism had probably been open for twelve hours, and the blood was leaking out all that time.

Dr. F. T. Miles said the history of this case helped to

show that it was not necessary for the chambers of the heart to empty themselves to carry on its function. The right auricle in this case was probably always distended with blood. He recalled the case of a man who had attacks of spasms of the glottis, and whose circulation and breathing were impeded. No one had made a diagnosis. The autopsy showed an aneurism pressing on the trachea, and probably carrying on its effects through the recurrent laryngeal nerve. It was not easy to see why such attacks were paroxysmal, and not continuous. He thought that when an aneurism once burst, nothing could be more sudden than death.

Dr. William B. Canfield said he thought many cases were on record in which the patient had lived for twenty-four or forty-eight hours, or even longer, after the aneurism had broken. He had reported a case last year in which the symptoms, produced by pressure on the pneumogastric and recurrent laryngeal nerves were well marked. In this case there was hoarseness and stridulous breathing, and the pupil was also affected. The case had improved under the use of the iodides, the worst symptoms disappearing, but the patient passed out of his sight, and the diagnosis had never been confirmed by an autopsy. Several other physicians had also seen the case, and had pronounced it an aneurism of the aorta. The iodides, and particularly the iodide of sodium, had been much used of late in these cases. He had under observation at present a man who suffered with violent palpitation, cough, contraction of the left pupil, and he suspected an aneurism, but none could be found. The man had worked in lead, and had had lead colic. The iodides had done him good.

A CASE OF LABYRINTHINE VERTIGO.

Dr. F. T. Miles reported a case of a boy, sixteen years old, who had attacks like epilepsy. He would suddenly fall down and get up again, and when asked, would say nothing was the matter. His eyes would roll. The important point was the loss of consciousness. The boy said he did not lose consciousness, and his friends said he did. It was difficult to say whether he did or not. Patients with petitmal often lose their consciousness without knowing it. This patient had fallen at times. He could walk a straight line without hesitation or deviation, but when he stood with closed eyes he went over to the left side. It was not locomotor ataxia; he could get no knee jerk out of him. He thought it was

a case of labyrinthine vertigo. He had had otorrhœa and loss of the drum membrane. This case was as interesting as some of Mr. Gower's. He laid much stress on the way in which he fell to the left. He thought tinnitus aurium was not sufficient to cause it. It was much like epilepsy.

Dr. William B. Canfield, in referring to this vertigo and falling to the left with closed eyes, asked Dr. Miles if a perfectly healthy individual, with one ear artificially stopped, would be apt to fall over on closing the eyes. The sense of hearing has much to do with preserving the equilibrium in total darkness, as any one might notice. It would be interesting to know if one totally deaf suffered any less from seasickness than others.

ANTIFEBRINE AS A HYPNOTIC.

Dr. T. A. Ashby asked if any one had used antifebrine as a hypnotic.

A PECULIAR IDIOSYNCRASY.

Dr. Thos. E. Murdoch, in treating a child with double lobular pneumonia, had used beef, wine and iron, and noticed that the child put its hand to its head, and on stopping this preparation the child grew better. He thought it was not the alcohol, as he had continued that. He attributed it to the iron, as the grandmother had always been unable to take iron. It was a remarkable case of heredity.

STATED MEETING, HELD MARCH 6, 1888.

In the absence of the President, Dr. S. C. Chew occupied the chair.

ELECTROLYSIS IN STRICTURE OF THE RECTUM.

Dr. S. T. Earle reported progress of a case of stricture of the rectum from syphilis, which he was treating by electrolysis. This treatment was necessarily slow. She had had the stricture six or seven years; and had been operated on two years ago, when linear proctotomy was performed, which was not followed by dilatation, and so it grew up tighter than before. It was the worst case Dr. Earle had ever seen. On introducing the little finger into the rectum, he could not even feel the indentation at the point of the opening. He succeeded in introducing a small silver probe. She was able to have fluid stools only with straining. His first intention was to do linear proctotomy, but concluded

to use electrolysis as a matter of trial. He used a Barrett battery, introducing the electrode with steady pressure, without force, for ten to fifteen minutes, and using ten cells. This was done, at first once a week, and the opening grew larger as the size of the electrode was increased. He had so far eight sittings, and that very day he had introduced a bougie, two inches in circumference at the large end, almost all the way in. There was less straining and little pain now, and the stools were partly solid. There was a neoplasm in Douglas' cul-de-sac, and this was being absorbed by the current, and the last was better than before. The positive pole was placed over the abdomen and not on the buttocks. Is very much pleased with the progress thus far. He will report future progress. In answer to Drs. Uhler, Ashby, and others, Dr. Earle stated that a sitting generally lasted from fifteen minutes to a half an hour. The negative pole was in the stricture, and the irritation and pain from it soon subsided. He had used as high as fifteen cells with the largest electrodes.

SALICYLATE OF AMMONIUM IN TYPHOID FEVER.

Dr. John R. Uhler stated that he had, a short time ago, treated typhoid fever on a different plan. He had been fearful of death from the outset, the patient being a very delicate person. He had given the salicylate of ammonium in hot water a trial, based on the work of Dr. G. M. Sternberg, in regard to the thermal death-point of the different germs. He noticed that the temperature at which the typhoid fever germ was killed was lower than many others, and hence he decided to use hot water on the abdomen. He did not see this patient in time. The temperature was 101° to 104°. He used the ordinary remedies for a day or two, and then he gave the salicylate of ammonium. A water-bag was filled with water, and at as high a temperature as the patient could bear; and as the patient was much emaciated, the heat was easily conveyed through to the intestines. The salicylate of ammonium reduced the temperature, but created debility, which might have been from the disease; but it was more than one would expect from the disease alone. The temperature came down, and the tongue was clean, and most of the symptoms disappeared, but the case was, notwithstanding, quite prolonged, lasting seven to eight weeks. At no time after this treatment was there high temperature. The patient went on to

convalesce. The drug was given in seven to eight grain doses.

ICHTHYOL IN ACNE.

Dr. Uhler also spoke of ichthyol, or the sulpho-ichthyol of ammonium, which is said to prevent suppuration in boils. He has been trying it in acne and scrofulous glands. If there was anything in the prevention of suppuration by sulphur, he thought it was worth the trouble to paint it over ulcerations.

Dr. S. T. Earle said he had frequently used the salicylate of sodium in continued and malarial fever where he wanted to continue the febrifuge action. He recalled a case in which fifteen grains every three hours caused a cure in forty-eight hours.

Dr. Uhler had also used the salicylate of sodium, but thought it was objectionable on account of its action on the bowels.

Dr. C. C. Bombaugh asked if Dr. Uhler's treatment arrested the perforation of the bowel.

Dr. Uhler thought it did, but the duration of the disease was not cut short by it.

Dr. William B. Canfield, in referring to the effects of the salicylate of sodium on the bowels, said he had seen the drug used in the Vienna hospitals for acute rheumatism, in doses of one gramme (fifteen grains) every hour, and he had not noticed any effect on the bowels.

WILLIAM B. CANFIELD, M.D.,
Reporting Secretary.

Iodoform in Surgery.

BY GEORGE E. STUBBS, A. M., M. D., OF PHILADELPHIA.

Read before the Medical Society of the State of Pennsylvania.

THE Empirics of the third century of the Christian Era professed that their whole practice was based upon experience, to which word they gave a special meaning. Experience could draw from three sources, viz.: from observation, history and judgment by analogy. These three bases of knowledge were called the "tripod" of the Empirics.

We differ in many respects from the beliefs and customs of this medical sect, but particularly in examining into the

causes of disease, accepting the teaching of anatomy and pathology.

In occupying a few minutes of your time, in order to read to you some thoughts upon the subject of Iodoform in Surgery, I do not feel that I am exactly abusing your good nature in presenting a much presented subject, for the reason that I am following in the line by which medicine has been advanced in all ages of its history, while considering the worth of an agent, whose merits seem to be by no means agreed upon by the profession.

In referring to its natural history and chemistry, I know you will hardly expect me to enter into minute details. Iodoform is derived from iodine, one of the so-called "halogen elements," or salt-producers, and classed chemically with fluorine, chlorine and bromine, under that term. Etymologically the word iodine, on account of the *violet* color of its vapor, is derived from the Greek ἰοειδες.

Iodine is a non-metallic element, obtained principally from the ashes of sea-weeds. It is also found in some minerals combined with mercury, silver, lead, and other metals, in Chili saltpeter, etc. In short, it is widely diffused. Large quantities are made from kelp, or prepared sea-weed. It was discovered by Courtois in 1811, in the waste liquors from the manufacture of sodium carbonate, from the ashes of the sea-weed.

Iodine has been in use since first employed by Dr. Coindet, of Geneva, in Switzerland, for goitre, and by analogy it was soon tried and found useful in other tumefactions of a scrofulous character. In short, we may say that this medicine has been found most useful in three directions, as an alterative, as a stimulant to the secretions, and as a topical agent.

But it would take too much time to refer further to the non-metallic element iodine.

In the Index Catalogue of the Library of the Surgeon-General's Office, I find that the bibliography of iodoform alone, not to speak of iodine, takes up a number of closely printed columns, although the earliest reference to the use of the agent, by R. M. Glover, of London, and Bouchardat, of Paris, is as late as 1847. The compound iodoform, or the teriodide of formyl, was discovered by Serullas, in 1822. The *United States Dispensatory*, by Wood and Bache, for 1858, says:

"It may be obtained, according to the process of Messrs.

Cornelius and Cille, of Liege, by adding an alcoholic solution of iodide of potassium, heated to 104 degrees, and chlorinated lime, in successive portions, stirring after each addition until the liquid ceases to assume a dark red color. On cooling, a confused mass of crystals is deposited, consisting of iodoform and iodate of lime. By treating these with boiling alcohol of 90 per cent. the iodoform alone is dissolved; and the alcoholic solution, as it cools, deposits the iodoform in crystals. (*Journ. de Pharm.*, Sept., 1852, p. 196.) It is in the form of small, yellow, pearly crystals, having a strong, saffron-like odor, and sweet taste, insoluble in water, but readily soluble in either alcohol or ether. It is a volatile substance, soft to the touch, and totally devoid of corrosive properties. Given to the inferior animals, it destroys them in a smaller dose than iodine does, producing depression, followed by a stage of excitement, with convulsions, etc. Though containing twenty-nine parts in thirty of its weight of iodine, it has not the least local irritant action. In the form of vapor it possesses anæsthetic properties, but inferior to those of chloroform. On account of its large proportion of iodine it is supposed to be capable of replacing that element and the iodides as a remedy, with the advantages of being non-irritant, and of having an organic nature, qualities which favor its absorption and assimilation. Besides the virtue which it possesses in common with iodine, it is capable of acting as an anodyne, and is useful in neuralgic affections. The principal diseases in which it has been tried, are goitre, rickets, scrofula, phthisis, amenorrhœa, syphilis, glandular tumors and cutaneous eruptions. In chronic enlargement of the prostate gland, M. Moretin recommends the employment of iodoform as a suppository, made of a scruple of iodoform to an ounce of cocoa butter. The dose of iodoform is from one to three grains, three times a day, given in the form of a pill. In the treatment of cutaneous diseases and tumors, it is applied in the form of ointment, made by mixing from half a dram to a dram with an ounce of lard."

From what has been already remarked, and from the general concord of experience in its use, it is plain that iodoform is indicated in all these numerous cases of syphilitic and scrofulous ulcers, in open glandular affections, in some cutaneous eruptions of a strumous nature, on account of its alterative action, and on ill-conditioned tissues of the kind named. But in saying this we have named but a part of

the virtues of iodoform, and those which have been known longest. Iodoform is indicated secondly, on account of its non-corrosive and non-irritant action upon soft tissues, having, according to my experience, much the same alterative effect as iodine when applied as an ointment externally, or when injected in a fluid, into unhealthy cavities such as abscesses, without the irritant effect. A second valuable indication has already been suggested, viz.: the anodyne influence upon painful ulcers. This I have seen confirmed in many cases of painful, sluggish ulcers, such as are apt to crowd our city clinics, as well as in many kinds of wounds, hemorrhoids and fissures.

It is, however, in its character as an antiseptic dressing agent that iodoform should be most appreciated. It contains 96 per cent. of iodine, and Sternberg has shown that as a germicide, iodine ranks only below mercuric bichloride and potassium permanganate in his list, which I need not quote here. It is true, corrosive sublimate was shown to be forty times, and potassium permanganate 1.666 times stronger than iodine, but the action of corrosive sublimate and iodine is quite uniform, and these agents are accordingly considered by the experimenter to have the highest value when given as one part to the 5,000 for the mercuric salt, and one part to 200 for iodine.

To our German brethren should be given the greatest credit for showing its worth as an antiseptic wound dressing. Prior to the period of German experimentation, it is true, Glover, of London, had written on the physical and medicinal properties of iodoform in 1847, and in the same year, as I have already noted, Bouchardat, of Paris, discussed the subject, but these authors could have had no idea as to the great future for iodoform in surgery. In 1867, Feriol wrote concerning the local use of iodoform in syphilis, scrofulous and indurated ulcers and specific bubo. In 1880, Van Mosetig-Moorhof wrote an article entitled "Trial of Iodoform as a Dressing Material after Operations, as Opposed to Fungous Processes," for the *Weiner Medicinische Wochenschrift*, and followed it up with many other articles in that and other journals, thus making known throughout the medical world his valuable experience and observations.

From Germany the use of iodoform seems to be very generally diffused as a dressing after operations, and especially in such cases as seem to require an alterative agent,

where, for example, the granulations seem to be of a soft, fungous character, and the secretions are of an unhealthy character.

So far, I have only spoken of its indications and virtues. But if iodoform has a powerful influence in the prevention of pus-germs, so it may have an injurious influence when pushed to the extent that German surgeons sometimes used it at first, stuffing it into large wounds in large quantities, and using it over large surfaces. There seems to be a consensus of opinion, to the effect that iodoform when in solution undergoes gradual decomposition, evolving iodine, so that, as Pilcher says, "a kind of antiseptic reservoir is established, which, constantly and slowly giving off iodine in a nascent state, effectually hinders putrefactive changes in the wound." Iodoform does not seem to exert the same power as iodine in preventing or arresting erysipelas, which, perhaps, is on account of the alcohol used in the tincture. An objection to it is its odor, to correct which, musk, Peruvian balsam, essential oils, such as bergamot, cloves and peppermint, have been advised. It has been advised by Schork (Pilcher) to rub up a small amount of carbolic acid with the iodoform. Personally, I have found that a combination of acetate of lead, iodoform and ether, in cosmoline as a base, well boxed and rapidly used, gave off but little odor, and seemed all the more efficacious on account of the ether used. I use about one-fourth as much of the lead as of the iodoform. Poisonous doses cause rapid and weak heart-beat, coma, and paralysis of the respiratory organs.

The degree of poisoning may go on to mania, or only to the point where the patient is restless and uncomfortable, complaining of headache, poor appetite, the taste of iodoform in his mouth, and wakefulness. No antidote has appeared. The treatment is to stop the drug and stimulate with some of the alcoholic stimulants.

The accepted method of using iodoform seems to be only as a topical agent. As such it is used in a powder, being shaken over a wound previously cleansed and ready to be covered, or else applied by means of iodoform gauze or cotton, as excellently prepared by Grosvenor and Richards, of New York and Boston. In the dusting of a wound merely, one of the domestic pepper-boxes can be appropriated, but I think an iodoform blower is much to be preferred for that purpose, and this also has been prepared in simple form by the firm named. Care should be taken, of

course, to cover all parts of the wound with the powder, gauze or cotton, and the wound being once *well dressed*, the surgeon will do well to let the dressing remain on till the evident presence of pus, or a too great amount of surgical fever, demands an examination.

I have been using this agent in private and hospital practice, and in my surgical clinics, for some years, and have learned more and more to respect it as a very useful friend, and a lightener of my work.

I note but a few cases of different kinds of wounds to illustrate what I have said as to treatment and results:

Case 1 is that of a young foundryman, of good muscular development, who came to me as a sufferer from a deep-seated abscess of the left thigh, in the middle third. The pain was excessive, and the usual routine treatment of hot poultices was used until the probability of the presence of pus was rendered certain, when the abscess was evacuated, a pyogenic membrane removed, and the cavity disinfected with carbolic acid water, carefully injected. Usually I have found that the use of carbolic acid in wound washes rapidly lessens the amount of pus formed, and promotes healing. In this case it did not do so, and the abscess cavity continued in an unhealthy state. Suspecting that my patient's case was handicapped by some cachexia, I inquired more carefully into his history, and found that he had had syphilis some years before. I then used iodoform in the abscess cavity, and the potassium iodide in five-grain doses internally, and in a short time my patient got well.

A second class of cases is an important one on account of the great number of them. It is true that they are "walking cases," such as lead up to all city clinics, viz.: the sluggish ulcer type, and they are usually found in the old of both sexes, and in connection with varicosity of the veins. In such cases I have found no remedy more efficient than iodoform combined, as before mentioned, with acetate of lead, ether and cosmoline. In these cases, some having existed for thirty years, I have used Goulard's cerate, the oxide of zinc ointment, strapping, warm baths of bran and water, puncturing antiphlogistically, and slitting the beveled edges to relieve the tension; but I have more faith in iodoform than in any one agent—yet some of the measures named are very excellent adjuvants.

Case 2.—J. Z., a young man, came into my surgical clinic February 2, 1887, with a large, incised wound of the

palmar surface of the left forearm, made by a rough, unclean instrument, and neglected till freely suppurating. The wound was powdered with iodoform, after being cleansed with mercuric wash, and then the edges of the wound were approximated by iodoform compresses, pressed on outside of the lips of the wound, and a bandage was applied. February 9th, one week later, the wound was examined and found to be granulating nicely. Iodoform continued, and one week later the wound was nearly healed. Case discharged cured.

Cases 3 and 4.—Cases of lacerated and contused wounds of scalp. Washed with mercuric wash and iodoform dressing applied. Promptly healed.

Cases 5, 6, and 7.—Severe incised wounds of four fingers with a knife; also another from a buzz-saw; also lacerated wound of finger. In each of these cases, as in all our cases, the corrosive sublimate wash was used first, and then iodoform in powder, and iodoform cotton or gauze or both were used with prompt and successful results.

Case 8.—M., a boy of eight, in Charity Hospital (where, in the course of a year, we have some seven thousand cases), presented himself with matrixitis. His case is like several I have seen in Charity Hospital or in the surgical clinic of the Medico-Chirurgical Hospital. A splinter had gone deep under the nail of one finger, causing an abscess, which was not attended to until much pus, unevacuated, had set up inflammation of the matrix of the nail, causing its loosening, when I removed it, and after using iodoform for a week or ten days, the part was healed.

Case 9.—E. H., a young man, came to my clinic with a large sebaceous tumor of the face. Tumor removed, iodoform dressing applied, and patient rapidly healed. This was but one of many tumors removed from different parts and dressed with iodoform dressing, and parts healed.

Case 10.—T. McG., Feb. 15, 1887, salesman at Wanamaker's Grand Depot, was brought in with his left foot severely crushed by being caught between the edge of an ascending elevator and the wall. The line of impact was across the first row of phalanges, just anterior to the ends of the metatarsal bones. There was a compound fracture of the first phalanx of one toe, and simple fractures of the two other toes, with possibility of a comminution of the bones to a small extent. It was thought best to try and save the toes. Wound was dressed antiseptically, and with

iodoform. One week later the second toe required to be amputated on account of interference with the circulation, causing gangrene; and a week after, most of the big toe being gangrenous, it was also amputated, the outside skin only, which was healthy, being utilized as a flap, and turned over upon the healthy granulating surface of the anterior and upper portion of the foot. Two weeks later the third toe demanded amputation at the same point where the other toes had been amputated, that is, at the metatarso-phalangeal joint, by the side-flap operation. In this case iodoform was used throughout, but I think conservative surgery was pushed a little too far for the sake of saving the toes. We have seen so much accomplished by modern antiseptic surgery, especially by iodoform dressings, that we are apt to think we can go still further. As it was, the man made an excellent recovery, and walks about with a good stump.

Case 11—J. B., a man past middle-age, was brought in, April 27th last, also from Wanamaker's Grand Depot, suffering from a fresh injury to the right hand. It had been caught in a farming machine and crushed, a simple fracture of the fourth metacarpal bone being sustained, and a compound comminuted fracture of the end of the third metacarpal bone being also received. The whole end of the bone being comminuted, it was removed, the open wound washed with the mercurial wash, an artery (the ulnar) ligated, on account of a cut at the wrist, and the hand laid on a flat splint, so as to keep the bones in line, and dressed with iodoform. Result: good recovery.

Case 12.—This case, the last I shall mention, was of great interest to me as showing what can be done in lacerations of soft parts by the iodoform treatment. A. S., a young German about twenty-four years of age, was brought into the Medico-Chirurgical Hospital, May 25, 1887. I was called to see him. The wound, which had been received from the plunge of a bullock's horn, was in the middle third of the left arm. I found that fully nine-tenths of the biceps muscle had been torn through by a tear across the whole arm. After washing antiseptically, I stitched the different layers of muscle and the superficial fascia with catgut, the skin with iron-dyed silk, strapped with Meade's plaster, applied iodoform compress, bandaged with the arm in flexed position, and did not open until three days after, when some erysipeloid appearance presented itself. I then opened and

found a very little pus of quite healthy appearance at lowest point of wound, but most of wound had united by first intention. Gave quinine and muriated tincture of iron internally, smeared over the erysipeloid parts for two or three days with carbolic acid and cosmoline, one-half dram to the ounce, and the erysipelas was soon cured. The case was kept under iodoform compress treatment throughout, and make so rapid a recovery that the patient was allowed to leave at the end of the second or beginning of the third week. When I saw him, about a month after injury, he could extend his arm almost in a straight line, and was nearly well.

To conclude, I look upon iodoform as perhaps the most valuable of the antiseptic agents—not so powerful as corrosive sublimate—but since it is safer, and applicable in so many different ways, and its action is sustained by the gradual evolvement of iodine for so long a time, it seems to be the agent that excels as a preventative of unhealthy wounds, but is withal very useful for its alterative and anodyne influence.

Selections.

Rhamnus as an Alterative.

BY ALEX. HUTCHINS, M.D.

Read before the Medical Society of the County of Kings, October 18, 1887.

THE justification of a note on rhamnus rests on three facts:

1st. That the rhamus frangula was a long-used, continental remedy, which ultimately fell into comparative desuetude.

2d. That the rhamnus purshiana, through most extensive advertising, has attained a very extensive use and wide notoriety, and has found a very positive abiding-place in the confidence of many medical men, at home and abroad.

3d. It has been openly questioned whether the later and advertised rhamnus purshiana is a simple extract or compound, and whether, simple or compound, it possesses any advantages over the rhamnus frangula. Granting that they stand nearly on a level, one should be eliminated to simplify

the materia medica, and preference should be given to the one more easily obtained, more constant in supply and the cheaper.

Point is given to the consideration of these facts because, in the estimation of many practitioners, the rhamnus is a drug for which, in wideness of application and persistency of results, there is no known substitute.

In a late *Ephemeris* occurs a note on the rhamnus, many of whose statements will command the assent of all who have had any prolonged experience with the drug. To the settlement of the comparative utility of the frangula and the purshiana, Dr. Squibb offers a crucial opportunity. No one can fairly call in question the conscientiousness and skill of this chemist, and when Dr. Squibb offers two fluid extracts, each of the two simples, if there be a desire to contribute to the settlement of the question, the varying quantity will be in the observer and not in the drug.

Apart from this, however, observation has shown that the rhamnus has a wide application in the relief and cure of simple chronic constipation. The details of its use have never been fairly and fully stated, but the general fact is well known.

It seems to be pretty well agreed, and it certainly is true, that the rhamnus is not suited to cases of constipation due to organic changes or to acute disorder. It has no place as a purgative. Its action is not prompt, and any dose designed to effect rapid action would be so large as to produce severe intestinal pain. It needs to be given in moderate doses, often repeated, continued for a lengthened period till the habit of regular movements is established, then diminished in quantity and frequency and continued in diminished doses at regular intervals, for such periods as observation may deem sufficient. Its continued use does not produce reaction. It is an unquestionable alterative, in that it is a stimulant to normal intestinal secretion, and furnishes conditions for the free digestion of food, which is the ultimate condition of regular evacuations. Except within the limits above stated, the cases for its exhibition do not require careful selection. It is capable of producing one set of results in a definite way, and while there is no one drug so suitable and trustworthy in the muscular and secretory intestinal torpor producing the constipation of advanced life, it is equally manageable in the functional constipation of very young infants and of children.

I am not sure how fully agreed observers are as to the modes of its ingestion, which seem to the writer of not only considerable, but necessary importance. These are:

1st. The taste is sufficiently unpleasant, and the digestion of the drug sufficiently liable to promote intestinal pain, to demand a combination with glycerine and carminatives, and experience shows that these need to be fairly in excess; and

2d. Its digestion is most effectively gained and its results most accurately secured when given with food at the regular meals. In the writer's opinion these are essential points in practice.

It is, however, not the object of this note to rehearse or enforce the claims of rhamnus as an efficient drug in overcoming the habit of chronic functional constipation. The literature of the drug ends with this limit of its therapeusis.

But the writer has come to regard its invariable efficiency in all sorts of functional dyspepsia as without a substitute in any known article of the materia medica. This form of statement is capable of being greatly misunderstood, for all general statements in medicine are open to grievous exceptions. Clearly it would be as absurd to say that rhamnus was a specific in dyspepsia, as it would be contrary to experience to affirm the same of pepsin, bismuth, or the mineral acids. And those who have dealt most patiently with the management of dyspeptic conditions, estimate most clearly the *palliative* rather than the *curative* virtue of drugs. In the same line, no teacher would be likely to affirm the entity of dyspepsia as a disease, as no practitioner would be hopeless of curing a case of dyspepsia if he could have absolute and intelligent control of the entire details of all the influences, material and otherwise, that would affect the processes of digestion in any one particular case. That is to say, as physiology teaches that digestion begins with mastication and ends with defecation, so a perfect digestion involves the integrity of structure and completeness of function, along the whole track of the canal, with the contributing organs, from the buccal membrane to the sphincter ani. And it is equally true, that in chronic functional dyspepsia, the functional disturbance is not limited, though it may be most prominent, to any one portion of the tract, but there is of necessity a variation from the normal condition along the whole line. And the accuracy of this statement is not affected by the varying and opposite conditions that prevail.

No matter what may be the prominent symptom, constipation, diarrhœa, flatulence or pain, there is a general disturbance of the correlation of function, and the excess or diminution in one part involves diminution or excess in another. The equilibrium restored, normal digestion occurs, and a cure is effected.

I am aware that this class-room teaching and not needful to a scientific hall, except as it enunciates a principle which is the basis for skillful therapeusis, and, if it is fairly grasped, discriminates between palliative and curative intention in undertaking the treatment of chronic dyspepsia.

And, certainly, originality can not be claimed for this statement of principle, for until the days when skepticism as to the efficiency of drugs began to take possession of medical men, the word "alterative" was prominent in therapeutic description—a confession of ignorance, but a statement of fact as well. "Alterative" did convey a meaning, but that meaning found expression rather in the observation of general results than in the production of any tangible symptoms, and the old observers, who were wanting in the instruments of precision, saw some things, between which and us the veil has been drawn. I imagine the practice has not changed so much as we are taught to believe, but the difference is that we act blindly where they acted in the light of their own intelligence, and though we use the same medicines they did, they classified them differently, and it is an act of heroism, amounting almost to foolhardiness, to stand in a scientific presence and assert the real presence of an "alterative." The days of calomel are not among the dead past. Do you not dust a little calomel on the bluish, passively-congested conjunctiva to alter its functional torpor? Do you not apply calomel to an indolent ulcer to *alter* its nutrition? These you *see*. Have you not a vague experience that teaches you to apply calomel to a functionally perverted intestinal tract which you can not *see?* In a blind way you commit yourself to the unknown, and when you emerge into the sunlight, it is, as it were, from a sleep. Not so your fathers. They carried a torch along the tortuous way, and "alterative" was graven where the hand grasped the phosphor. Was not the first lesson taught you in your Freshman Year in college, "When in doubt, play trumps." Now that the world has grown older, and you are bald or gray, do not the scientists, Pole and Cavendish, tell you to lead from your strongest suit and from five trumps always?

It's, after all, only a difference in nomenclature. It's the same old calomel.

Opium, that soothes an excessive peristalsis and thus permits the jejunum to secrete its natural juices, is not thereby an "alterative. A dose of calomel that will empty an engorged liver is not thereby an "alterative." But there is rarely a case of chronic functional dyspepsia that, some time or other in its career, does not undergo a course of slow and moderate and continued calomel treatment, just precisely, and with the same ultimate intent, that Dr. Benj. Rush administered it to his associate signers of the Declaration of Independence one hundred years ago, making mercury mines of Colonial graveyards. Only Dr. Rush wrote of "alteratives," and our modern professors of practice and therapeutics, in the present phase of learning, would hesitate to mention the name.

There is a difference between the treatment of symptoms and the symptomatic treatment. Our globulous friends may hold the monopoly of the latter, but the search for removal of causes that give rise to symptoms is the very essence of scientific medicine. In the effort for precise medication, therapeusis lost a grip when "alteratives" were dropped from the classification.

Notwithstanding the fact that the rhamnus has one single reputation as a medicament for constipation, any fair study of its mode of action will fail to classify it easily with the recognized purgatives and aperients. It can be made to purge, and so can arsenic. Its uncertainty of action, irritating effects, and occasional violence, make it useless as a purgative. The same conditions hold true of it as an aperient. There is no evidence of its action on any definite portion of the alimentary tract. The system does not acquire a tolerance. All these effects can be obtained when combined with other drugs; but combination only confuses, and does not explain the modus operandi of rhamnus.

In its use two things are clear: First, that, digested with food, it, at the same time, sooner or later, produces catharsis; if, then, the size of the dose, the frequency, one or both, be reduced, the effect can be maintained. The reduction of dose and frequency continued, a point is ultimately reached when a normal secretion is established, and beyond this rhamnus is an irritant; second, and a corollary to this, in health rhamnus is always an irritant.

The rhamnus, therefore, within its own scope of action,

regulates perverted functional secretion. If words have any meaning, rhamnus is an alterative.

It was at this point that I began its use as an adjuvant in the treatment of chronic functional dyspepsia. It serves a purpose continuously, where mercury can have but occasional use. Its very efficiency as an alterative not only permits it to be used continuously, but demands that it should be so used. This is an alterative *sine qua non*. When it is used, it shall be used all the time. The dosage as to size and frequency is governed by the demand.

It is no bar to accepting the argument that chronic dyspeptics are not always chronic constipates. The opposite is often true. A chronic dyspeptic may have existed who was addicted to regular movements of the bowels. He must be a *rara avis*. Irregularity is the rule, and it is the business of an alterative to produce regularity.

This paper must stop here, for the next step would lift it to the plane of discussing the entire treatment of chronic functional dyspepsia—moral, hygienic, dietetic, and the therapeusis of drugs—in the midst of all which rhamnus could play but one role.

Except the patient be rich enough to afford continuous visitation, and pliant enough to submit to much mortification of the flesh, to say nothing of the world and the devil, a compact specimen of chronic dyspepsia is the worst kind of projectile dynamic to explode among the daisies that bedeck the busy doctor's path; and if he happen to pin his faith on rhamnus, he must not push it to illogical conclusions; for if his patient should happen, for instance, to have come to the knowledge of his stomach through the wearing experience of nervous strain and watchful, anxious, carping care, all the purshiana from the Sierras to the Golden Gate, and all the frangula from the gunpowder districts of Fatherland, would be inefficacious as an alterative, unless, perchance, with brain rested and pulse brightened by an Atlantic voyage or transcontinental trip, he shall himself pluck and peel and dry the small quill bark with his own right hand.

Just one word more of plain matter of fact and practice. For many years I have not varied my formula of use. A mixture of equal parts of rhamnus, glycerine, syrup of ginger and peppermint water represents ×4 to each ℥j. This is capable of being adapted in size and frequency, easily, to every age, sex, color and condition of life. In general, ℥j.

after each meal until more effect is produced than required; then check off the noonday meal, later the morning meal, then continue with such diminished doses as will insure the desired result, and continue with the minimum dose so long as may be useful.

DISCUSSION.

Dr. T. M. Rochester: I have been very much interested in Dr. Hutchins' able and entertaining paper, particularly so in his new and ingenious definition of an alterative. As regards the drug itself, however, my experience has been different from the writer's, as I can not recall one in which I have been so thoroughly disappointed. Perhaps too much was expected of it, as an efficient laxative in habitual constipation has been a long-felt want by the profession. Especially has this disappointment been met with in the use of the rhamnus purshiana, or cascara sagrada, as it is usually called.

I have employed it in a large number of cases, in many different ways, and I believe in all the forms that are on the market.

I have even introduced suppositories of it into the rectum. My failures with it have been signal and wide-spread, the successes rare and exceptional. Another thing I have noticed is the uncertain action of the drug on the same person at different times. Especially has this been so when the preparation has been procured at different druggists'.

The possible reason for this might be interesting for you to know, viz.: that it has been found that a large number of the samples offered for sale are adulterated or intensified, whichever you choose to call it, by the addition of cathartics.

In my hands the rhamnus frangula, or buckthorn, has proved decidedly the more satisfactory; and this was to be expected, from the fact that the supply is regular and constant, as I am informed that all of the bark is gathered during the months of July and August, when the twigs are gathered for the purpose of making charcoal for sporting powder. So, as it will be seen, this would most naturally be done at the time when the bark could be most readily separated, namely, at the time when the sap was running. Even the frangula has been disappointing as a laxative in my hands, and has been mainly used for aperient or cathartic purposes.—*Brooklyn Med. Jour.*

Notes on the Use of Chloride of Methyl.

BY WM. M. THALLON, M.D.

Read before the Medical Society of the County of Kings, October 18, 1887.

CHLORIDE of methyl was introduced to the profession in 1884 by M. Debove, of Paris. He reported a number of cases before the Medical Society of the hospitals of Paris, in which he had used this agent externally in the treatment of neuralgias, both primary and secondary. His results were so remarkable that several of the French observers at once had recourse to his methods, and a series of clinical reports have since appeared in the French medical journals. The uniformity of results obtained is quite striking, most of the cases, even inveterate sciaticas of years' standing being cured, while all are reported as being more or less relieved. My own attention was directed to this remedy by the manufacturers, Messrs. Brigounet & Noville, of Paris, who sent me two syphons filled with chloride of methyl, with the request to try it and report on the results. I sent one of the syphons to Dr. E. C. Seguin, of New York, whose experience so far, I believe, has been favorable, but which he will doubtless himself report fully hereafter.

The first case I tried chloride of methyl in, was a patient who had been a martyr to neuralgia in various forms for years, and who, in consequence, had had recourse to morphine. I found her suffering from intense pain, located apparently in the musculo-spiral nerve of one arm. There were numerous painful points on pressure, especially where the nerve enters the musculo-spiral groove, and where it pierces the external inter-muscular septum. I tried various remedies—aconitia, arsenic, quinine, phosphorus, cannabis indica, atropine, all in efficient doses, without benefit. Then I used the constant current and sinapisms also, without affording relief. I was afraid I would be driven back to the use of morphine. At this juncture I received the syphon of chloride of methyl. I at once tried it, and the very first application gave great relief. The patient said she slept better that night than for weeks. I subsequently made slighter applications. The patient was so much better that she went to the country; this was in July. Last week I saw her again, and she stated that though she had had other pain in the shoulder, she had had no recurrence in the fore-arm.

The next case was one in which severe and persistent pain followed a mild attack of milk-leg. While the area of pain could not be nearly as accurately localized as in the preceding case, it was mainly referred to the cutaneous branches of the anterior crural nerve. The applications made were very extensive in area, but not very intense in degree. Unfortunately, my supply of methyl gave out on the second day, and a complete cure was not effected; still, the relief obtained was very marked. Other means, such as aconitia internally, the local use of the oleates of morphine and atropine, the constant current, lead and opium wash, sinapisms and extensive warmth, produced by wrapping the limb in heated cotton batting, had all been used previously, without affording any relief. The first change for the better immediately followed the use of the chloride of methyl. Dr. C. Jewett, who twice saw this case in consultation with me, will indorse the peculiarly inveterate nature of the attack.

The third case was one of facial neuralgia, the patient having had repeated attacks, sometimes accompanied by an herpetic eruption in the first division of the trigeminal nerve. Here a single application banished the pain, which has not since returned.

I should not have ventured to bring this matter before you with such meager clinical data of my own, if it were not that the evidence of the French observers was more ample. Thus, Debove, in his first paper, says: "My first patient treated was sent me by Dr. Dumonteil, and had a sciatica, which at different times had been fruitlessly treated by the actual cautery, and whom rest for one month during my hospital service had not in the least relieved. I applied the spray of chloride of methyl over the entire painful surface, from the hip to the external malleolus. One minute later this patient, who had been unable to take a step, walked without limping, declaring himself cured. He was quite stupefied at his recovery, and I may confess my astonishment was not inferior to his. But I knew too much of marvelous therapeutic results, due to coincidences and to the effects of imagination, and which the doctor does not again obtain on further trials, to be deceived. That is especially true of sciatica, which has actually been relieved by cauterizing the lobe of the ear. But, thanks to the frequency of this disease, I have been enabled to repeat my experiments with chloride of methyl, and I can affirm to-day

that we are dealing here with a therapeutic agent, the effects of which are constant and instantaneous."

In his further remarks, Dr. Debove cites over a hundred cases in which he had successfully used this method. The experience of M. Tenneson, whom I know personally to be a careful and conscientious observer, though not so extended or striking, is noteworthy. He reports thirty-seven cases in all. Of these, ten were sciaticas, in seven of which there was immediate and complete cure of the pain; in three marked relief, but only partial cure. In eleven cases of muscular rheumatism, nine were relieved of pain by one application of the spray, and two by two applications. In five cases of articular rheumatism, either acute or subacute, the relief of the pain was immediate, though the inflammatory swelling persisted and motion remained limited. Two cases of chronic articular rheumatism were markedly relieved of pain, and motion of the affected joints became more free. One case of periosteal pain of the sacrum in a tuberculous subject was relieved, and did not return during the few remaining weeks of his life.

Lastly, in seven cases of localized painful points—three in phthisis, one in purulent pleurisy, and three in acute lobar pneumonia—the spray brought complete relief.

I might quote still more extensively from the published reports, but these cases are sufficient to show that we have here a therapeutic agent that deserves investigation. I will now say a few words about the method of application.

The chloride of methyl at ordinary temperature is a gas which can be liquefied by extreme cold or pressure, or by combined cold and pressure. As used in medicine, it comes in the liquid state, in strong copper cylinders, under high pressure. If the pressure is removed, it expands and becomes a gas, the passage from the liquid to the gaseous state following the general physical law of absorption of sensible heat from the surrounding objects or air. This may be so intense as to produce a degree of cold in the object from which the heat is absorbed of 67° F. below zero. This property of chloride of methyl has been utilized by the French microscopists in freezing specimens for cutting.

In this apparatus, in the top, is a vertical pin, moved by a screw. On unscrewing it slightly, the chloride of methyl expands into the small chamber thus created; from this a lateral opening leads to the spray-tube, which is attached by a joint, allowing motion through a complete circle, by

means of which the desired direction can be given to the spray. The caliber of the spray-tube is extremely fine, and by means of this screw, which opens or closes it, its coarseness and the degree of force with which it strikes the skin can be accurately regulated. There has been hitherto no source of supply in this country where chloride of methyl could be obtained, but Messrs. McKesson & Robbins inform me that they are negotiating with the proprietors of this article in Paris for its introduction into the United States.

The distance at which the end of the spray-tube should be held from the skin, is from eight to twelve inches. The length of time the application to any one area of skin should last, varies with its thickness, but should never exceed one second. It is better to spray a part twice moderately, than too intensely once. The danger of too prolonged an application is that you may get a blister, an eschar, or even a slough, just as in frost-bite. This should never occur with anything like reasonable care. The color of the skin offers a perfect guide, and it should be closely watched. The moment the skin becomes pale and hard, our object is attained, and the spray should cease. This pallor of the skin is very rapidly followed by a more or less intense redness. This may persist from a few hours to several days, and some discoloration often lasts for weeks, but not permanently. Lastly, the most important practical point is, that as large a portion as possible of the cutaneous distribution of the affected nerve must be acted on.

These applications are to a certain degree painful; but owing to the rapidity and intensity of action of the cold, the initial pain is merely momentary. When the redness of the skin supervenes, there is more or less sensation of burning, but not as severe as that following the application of the actual cautery.

In conclusion, I would beg to draw your attention to the fact, that this method of treatment is in no wise offered as a substitute for proper constitutional medication; it is merely a valuable adjunct. It seems to me especially valuable in that the methyl spray is a reliable substitute for that fearfully abused class of medicines—anodynes.

The principle involved in the use of intense cold as a counter-irritant in medicine is very old, but this method of applying it is new. I think, moreover, it possesses certain decided advantages over any other therapeutic agent of its kind that I am acquainted with. In the first place, with

very little skill in manipulation its extent can be accurately regulated, so can its intensity. The rapidity of its action renders it far less painful as well as more efficient than the ether spray. I have tried both on myself, and can testify from painful personal experience. Its advantage over some other counter-irritants, such as cantharides, is that it can be so much more extensively applied and is not followed by a painful vesication or eschar, taking perhaps weeks to heal. I think my neurological friends will bear me out, that counter-irritation for the relief of pain should not transcend a certain degree of intensity, and should be applied, as far as practicable, to the *entire* cutaneous distribution of the affected nerve, in order to obtain the greatest good. I am quite sure it is not enough to counter-irritate over the painful points of Valleix. I have convinced myself clinically, in using the actual cautery, that you have the best success by starting at the most distant peripheral point and working toward the center. The same holds good for the use of the galvanic current in the treatment of neuralgia. It is this extensive adaptability that gives so much value to the spray of chloride of methyl.

I have confined myself in this brief note to the use of methyl chloride for the relief of pain, but if its counter-irritant properties are as reliable as I think them, I believe that its applicability is much wider. It would be hard to mention any therapeutic agency which has more thoroughly stood the test of long experience than counter-irritation. From time immemorial the testimony as to its reliability and efficiency has been overwhelming. Many pathological reflex actions, such, for instance, as coughs, are markedly relieved by properly applied counter-irritants. I do not doubt that some such method as this of the spray of chloride of methyl will offer the doctor a better means of applying counter-irritation than any other which we have at present at our command.

DISCUSSION.

Dr. A. Jacobi, of New York: I have been much interested in the hearing of this paper, and am sorry for having antedated Dr. Thallon in the publication of the paper. My experience with the chloride of methyl coincides with his. I hope attention will be repeatedly called to this matter until some means of supply shall be introduced into the United States. I can imagine nothing more easily manipu-

lated and of more instantaneous action than the methyl spray. It has not the continuous pumping of the other sprays. In the treatment of neuralgia my record only embraces five cases, and those were three fresh cases of trigeminal neuralgia, and two old cases. I was not able to experiment as far as I would like, as I only had a small quantity of the methyl. In one case the relief and cure occurred after the first application. In the two old cases there was relief after two applications, but I am unable to say that there was a cure. One case was that of hyperæsthesia following the whole course of the trigeminal nerve. This was relieved after the first application, and the patient wrote me a short time ago that there was no return. One case of neuralgia of the sympathetic had suffered from pains going through from the nipple to the shoulder-blade. In that case, after everything had been tried with no relief except by the use of morphine, I used chloride of methyl, and the pain was relieved instantaneously. But only a relief, not a permanent cure. Of the action of the chloride of methyl, I have expressed my view in the paper published. I did not attribute any inherent property to the chloride of methyl, but after reading a lecture by Marshall, I came to the conclusion that a number of neuralgias were not situated in the nerve-trunks, but in the nervi-nervorum, and that these are paralyzed or completely destroyed by the freezing process.

As to pigmentation as a result of the use of the chloride of methyl, I have only had one case of it—one severe case, which looks as if it were going to remain, but I do not think it is a serious objection.—*Brooklyn Med. Jour.*

Medical Society of the County of New York.

LEPROSY IN THE UNITED STATES, AND ITS RELATION TO THE STATE.

LAURENCE JOHNSON, M.D., President, in the Chair.

Dr. Charles W. Allen read a paper on the above subject. In replying to the question, Why should we stop to discuss a disease which appears of so little practical importance to us? the author reviewed the history of the disease in the United States, and considered whether the facts justified us in regarding it as a source of danger of national importance.

The earliest cases of leprosy in this country appeared in Louisiana and South Carolina. Later, it had appeared in the Northwest, where it was brought from Norway, and also in California and the West, being brought there by the Chinese. It has also occurred among natives who have visited foreign lands where the disease is prevalent, and a few sporadic cases have appeared among our own people without known origin. At least five sporadic cases, occurring in the United States, were on record. Dr. Allen thought it was not an overestimate to say that there are in this country today at least one hundred and fifty cases.

He regarded this as one of the most favorable countries in which to study leprosy. In addition to the review of cases already reported, the histories of two unrecorded cases were given, and one of the patients presented. The other patient had come under the care of Dr. Wiener, but was then in Paris. The further histories of some cases reported by Dr. H. G. Piffard in 1883 were also given. The patient presented had certain disfigurements of the face, especially over the eyes, due to the progress of the disease, which had led Dr. Allen to institute surgical interference for cosmetic effect. The improvement in looks had been considerable. He did not believe the progress of the disease would be any more rapid on account of such surgical interference. The results of treatment in a number of cases reported in this country had been markedly beneficial, especially that from chaulmugra oil, and led to the belief that these cases are less hopeless than they have hitherto been regarded.

The author then took up the subject of the contagious and hereditary character of the disease. While the majority of physicians, especially those residing in leprous countries, disbelieved in the contagious character of the affection, most of them did believe it to be hereditary. But Dr. Allen cited well-authenticated instances in which the children of an affected parent, continuing to reside with their parents, contracted the disease, while those of the same family who were taken from their parents while yet young remained well. This went to show that in some instances, at least, the cases supposed to be of hereditary origin were in reality of infectious origin, the infection taking place in the intimacy of family life. Similar clinical evidence of the infectious nature of the disease was given.

The proof of infection by experiments had not been satisfactory. The author thought there was pretty positive evi-

dence to show that leprosy had been spread, in a few instances, by careless vaccination against smallpox, the vaccine virus having been taken from those affected with leprosy. The mistake had often been made of looking for the evidence of the contagious nature of the disease too early.

Believing, as Dr. Allen did, in the infectious nature of leprosy, the question arose as to the advisability of segregation of the lepers in the United States. The right of the individual to personal liberty is one most zealously guarded in this country, and should not be taken away without good cause.

If it is right to segregate lepers because leprosy is an infectious disease, why is it not also right to segregate those who have syphilis and tuberculosis, which diseases are likewise infectious? The author replied to this question by saying that, if it were possible to eradicate syphilis and tuberculosis from our country by segregating those affected with these diseases, he would approve of its being done. But this might be impossible of these two diseases, which have so strong a hold on our population, while it would be quite possible regarding leprosy, of which there are but few cases yet in this country. It was just to sacrifice the interests of the individual when the good of the whole people demanded it.

Dr. George H. Fox has seen a number of lepers in this country, and many more in leprous communities or hospitals in Norway and other countries, yet he was unable to speak positively of the hereditary, contagious, climatic or hygienic nature of the disease. The majority of physicians were opposed to the view that it is contagious; individually, he was of the impression that leprosy is both contagious and hereditary; but it is only very mildly contagious, and for that reason he did not think we were justified in this country in depriving the leper of his liberty and association with other people. There was no occasion, he thought, for fearing a spread of leprosy throughout this country. Dr. Fox did not believe that leprosy is incurable. The benefits of chaulmugra oil in his hands had been marked. He cited one case in which it had resulted in cure. But if the patients were imprisoned with those suffering like themselves, deprived of all hope in this life, neither chaulmugra oil nor any other measure would be likely to prove of any benefit.

Dr. P. A. Morrow said his own impression was that lep-

rosy is contagious, and is also transmissible by inheritance. Yet we know very little about how the germs conveying the disease gain access to the system; whether they come from direct contact with the abraded surface of the diseased, through the air, water or contaminated articles. There had not been a single case in which the disease had been acquired among the patients of Charity Hospital who had associated with the lepers in that institution. In 1867 the opinion was formulated by the Royal College of Physicians, in England, that leprosy is non-contagious. The majority of physicians who have seen most of leprosy believe it to be non-contagious. While these facts did not prove to Dr. Morrow that leprosy is non-contagious, they did prove that it must be only mildly so, and he thought we might eliminate it as a possible cause of spread of the disease; and he did not think the State was justified in this country in segregating these patients.

We should not take leprosy as it exists in the Sandwich Islands as a basis of comparison with the probable course of the disease in this country. The surroundings and the manner of living are entirely different. Leprosy in Norway is dying out, yet the patients there are not strictly segregated; even after their admission to an institution, they are still at liberty to go out and associate among their friends.

Dr. D. B. Delavan thought the question should be studied from three different standpoints: First, Is leprosy contagious or communicable? Second, Is it communicable at all times in equal degree? Third, What has been the result of segregation?

While the disease may not have been shown to be very contagious, yet its history in Europe during the Middle Ages formed a most instructive chapter. Its ravages then were most terrific, and extended to all parts of Europe. Have we proof that a similar epidemic may not some time develop in this country? History went to show that wherever the disease has prevailed, segregation has been found desirable. Dr. Delavan expressed faith in treating, especially by chaulmugra oil.

Dr. Henry Koplik had seen only a few cases of leprosy, but he questioned whether surgical interference, as practiced in Dr. Allen's case, might not hasten the progress of the disease, as it was believed to do by some in the case of tuberculosis, which he regarded as an allied affection.

The author closed the discussion, after which the Secretary presented a communication from the Georgia Medical

Society, together with the following resolutions, which, on motion, were adopted:

Whereas, The feeling of humanity suggests that all medical and surgical supplies, instruments and appliances, including those used in diagnosis as well as in the treatment of diseases, should be furnished to those needing them at the lowest possible price;

Resolved, That the Medical Society of the County of New York would urge upon Congress that, in the cause of humanity, the import duty should be removed from all medicines, medical and surgical appliances, and from everything used in the treatment and diagnosis of disease.—*Medical Record.*

Operation for Abscess of the Spleen.

It is seldom that affections of the spleen come into the hands of the surgeon, and on this account, as well as its somewhat remarkable character, a case of abscess of the spleen, operated on by Dr. Carl Lauenstein, of Hamburg, and reported in the *Deutsche Medicinische Wochenschrift*, No. 51, 1887, is very interesting, and, so far as we can ascertain, no similar case has been reported in medical literature.

The patient operated on was a coppersmith, twenty-three years of age, who was admitted to the medical wards of the Seamen's Hospital, of Hamburg, on September 17, with a diagnosis of typhoid fever, after he had been sick fourteen days. He was in a febrile condition, pulse 96, tongue red at the edges and white in the middle, had been suffering with diarrhœa, and the abdomen was somewhat tympanitic. Splenic dullness was much increased, extending in the axillary line from the lower border of the fifth rib forward, and downward to the free border of the ribs, and backward to within a finger's breadth of the spinal column. From the middle line forward it encroached upon the region of normal cardiac dullness, and over the somewhat enlarged dull region of the left lobe of the liver. The spleen was not palpable through the abdominal wall, since the patient did not use the diaphragm in respiration, and during inspiration there was some retraction of the epigastric region instead of abdominal expansion. The patient complained of pain in the splenic region, though there was no sensitiveness on pressure. There was no pulmonary abnormalty, except an

unusually high position of the diaphragm on the left side, and some friction sounds at the boundary of the base of the left lung.

Under a fluid diet, wine and hydrochloric acid internally, and the pack externally the patient's condition was not materially changed. The temperature fell in the morning, and in the evening rose to 39° C. Three days after entering the hospital the patient had a severe chill, with a rise in temperature to 40° C., very small pulse, 128, and cyanotic lips. He then complained of increased pain in the splenic region, the dullness of which was not increased forward and downward, but above and behind was markedly increased. The dullness reached two fingers' breadth above the angle of the scapula, and had an extent of 35 by 18 cm. With the exception of the fixed condition of the diaphragm, and the marked friction sound at the lower border of the left lung, there was no abnormal condition of the thorax. On the day after the chill there was severe collapse, with a fall of temperature to 35.4°, small pulse of 72, and coldness of the extremities, from which the patient was aroused only by the use of stimulants and heat. As the pain in the splenic region continued after the chill, Lauenstein concluded that there was a purulent collection in the spleen, and, on the fifth day after the patient entered the hospital, he operated.

After the patient was anæsthetized the needle of the Dieulafoy's aspirator was inserted in the eighth interspace in the axillary line, at the point of spontaneous pain, and about the middle of the anterior portion of splenic dullness. The needle was pushed perpendicularly downward about two fingers' breadth, but no fluid was obtained till it was carefully withdrawn about 2 cm., when a small quantity of chocolate-colored fluid escaped, which had a penetrating fœtid odor. The needle was kept in place, and, in order to empty the abscess thoroughly, about 10 cm. of the ninth rib were resected, this rib being selected in order to avoid wounding the plura. In order to avoid hæmorrhage, the thermo-cautery was used to cut down under the resected rib and parallel to it. Though the spleen was lying close to the diaphragm, it was not adherent to it at the point of incision. After the cautery was carried down about 2 cm. into the spleen a chocolate-colored fluid welled up by the side of the cautery. The incision in the spleen was now widened to the extent of the resection of the rib, and the borders of this

incision brought up against and fixed to the wall of the thorax by means of hooks.

The finger introduced into the wound showed the presence of a cavity about as large as a goose-egg, the walls of which were friable, and in which several loose fragments of tissue were found, that were removed with forceps. The cavity was washed out with cold salicylic acid solution, and then tamponed with iodoform gauze ; the whole wound was then covered with an antiseptic dressing. Microscopic examination of the pus showed that it was composed of pus-cells mixed with some red corpuscles, fatty acid crystals, and hæmatoidin crystals. It was impossible to find either pus cocci or typhoid bacilli in dried preparations of the pus. The dressing was renewed on the fifth day after the operation, when it was seen that the spleen was adherent to the thoracic wall and to the diaphragm. Splenic dullness was at this time much lessened. For several days after the operation the temperature was about normal, but then rose, and the subsequent course of the illness was that of a case of typhoid fever. On October 11 the patient was entirely free of fever, but had the characteristic paleness and emaciation of typhoid fever, as well as the ravenous appetite of the convalescent. At the middle of October the cavity in the spleen had granulated well, and the wound in the thorax was almost cicatrized. When the patient left the hospital, on November 5, the area of splenic dullness was about 16×11 cm.

It is likely that this abscess was embolic, and it is known that embolic abscesses are most frequent in the course of the infectious diseases. Without operation the course of such an abscess could scarcely be otherwise than to a fatal termination from rupture and purulent peritonitis, or rupture into the pleural cavity. Lauenstein thinks it probable that in his case the abscess was one arising in the course of typhoid fever. Clearly the most rational and best surgical treatment was that adopted by Lauenstein. For the treatment of such abscesses we must draw conclusions from the results of treatment of abscesses in other internal organs, especially in the liver. The best results in abscess of the liver have been obtained, not by punction, but by free antiseptic incision, according to Lauenstein, who gives the mortality of the Lindermann-Landau and Volkmann operations as 4.7 per cent. It is true that Barbieri and Parzewski cured two cases of abscess of the spleen by puncture and aspiration, but in both cases the splenic enlargement and the

abscess were accessible through the abdominal wall, which was not the case in Lauenstein's case. Two important steps in the operation reported must be noted: 1. Puncture before the incision, by which the danger of an escape of the putrid contents from the over-full cavity was avoided; 2. Leaving the canula in the abscess until the opening was completed, so that it served as a guide for the farther opening. Finally, it must be regarded as a wise provision of nature that fixed the diaphragm so completely during the progress of the case, and before the operation. Had the diaphragm continued its work nothing is more likely than that the abscess would have been ruptured, and the contents extravasated. So, also, the circumscribed pleuritis at the base of the left lung was of no small consideration, since it caused adhesion between the costal pleura and diaphragm, without which the operation, by opening the left pleural cavity, would have much complicated matters.

Launstein gives the following points in the diagnosis of abscess of the spleen, beside the presence of an infectious disease, the changes in the temperature, rigors, etc.: 1. Enlargement of the area of dullness. 2. Spontaneous painful sensations. 3. Inflammatory phenomena in the region of the spleen (basal pleuritis and fixed position of the diaphragm). As for fluctuation, this could be detected only in cases in which the enlargement was apparent below the free border of the ribs.—*Journal Amer. Med. Association.*

Incisions and Hemorrhages of the Cervix Uteri During Labor.

Dr. Skutsch read a paper on this subject before the German Gynæcological Society, at Wiesbaden, September, 1887, of which the following is an abstract:

Cases are not very rare in which the inclination is urgent to terminate the labor in the interest of the mother or child, while the cervix is not sufficiently dilated to permit the extraction of an unmutilated child.

Withal, the dilatation may be normal, but not far enough advanced, or it may be pathologically delayed (rigidity of the os uteri, agglutination of the external os, insufficient dilatation associated with cramp-like pains. While treatment is simple in those cases in which the obstacle lies merely in the os (bloodless dilatation, short incisions), if a

rapid termination of the labor becomes necessary, forcible dilatation may be recognized also of a part or the whole of the canal above the external os. This can be effective only by free incisions of the cervix.

Short incisions in rigidity of the os uteri are largely recommended; deep incisions are generally cautioned against, owing to the dangers connected with them, such as infection, hemorrhage and further tearing of the cuts. These cautions are perfectly justified when the cervical canal is still long. But in cases in which rapid termination of the labor appears necessary, and there is only narrowness of the lower segment of the cervix (from the junction of the posterior vaginal vault downward), the indications for incisions serving to hasten the labor and save the life of the child might be somewhat extended.

The danger of infection may be looked upon as done away with, since we have learned to conduct labor aseptically. The danger of hemorrhage, however, is considerable in cases in which the lower part of the cervix is not yet dilated and the presenting part exerts still insufficient compression on its walls. But the hemorrhage can be certainly controlled by a simple procedure, in incisions reaching no farther than to the vaginal vault. The procedure may be illustrated by a case of labor in which the necessity for rapid termination of the delivery arose in order to save the life of the child, at a time when the lower part (1½ cm.) of the cervical canal had not yet dilated. The os having been exposed by a grooved speculum, six incisions, each about two centimeters long, were made with Schultze's bent scissors. Profuse hemorrhage occurred immediately from the first incision, and was arrested by suturing the wound surfaces. Button sutures all over the gaping incision united the cervical with the vaginal mucous membrane. The hemorrhage was arrested successively after each incision before the next was made. The threads were left long, so as to serve for subsequent traction. After these incisions, the opening enlarged sufficiently to permit the extraction of the child with forceps. The placenta having been expressed, two slightly bleeding lacerations which had occurred in continuation with the posterior incisions were closed with catgut sutures. The previous sutures placed for the arrest of hemorrhage were removed successively and the incisions stitched with catgut. The child was living and the puerperium normal. By proceeding as in the case cited, *i. e.*,

by arresting profuse hemorrhage from an incision with sutures around the wound surface before making the next incision, the hemorrhage can be certainly controlled where the cuts extend to the junction of the vaginal vault. It should be permissible to cut open the cervix to that point when insufficiently dilated, for the purpose of rapidly terminating a labor where this seems necessary.

While, in case of rigid os, small incisions into the tense ring are preferable, where the entire undilated lower cervical segment is to be rendered passable, it is advisable to incise first the right and left sides, if need be as far as the vaginal vault, and only when these cuts do not suffice to go in another direction, especially postero-laterally. After the labor is terminated, the temporary sutures for the arrest of hemorrhage are to be opened and the incisions closed by sutures like those used for recent cervical wounds.

When the incisions tear farther, the lacerations should be closed by suture, if possible; the threads which have been left long permit a rapid exposure of the field of operation. Should a lateral incision have torn far into the parametrium and given rise to profuse hemorrhage, the uterine artery can be circumligated from the vaginal vault.

In a case of considerable hemorrhage from the right side of the cervix, the author performed this circumligation with an ordinary curved needle. Perhaps it might be better to make a small incision into the mucous membrane, and then do the ligation with a blunt aneurism needle.

In all these manipulations it is important to be guided by the eye. In obstetrical manipulations this rule should be followed more generally than hitherto; the curved speculum should not be wanting in any obstetrical bag.

A search through the literature revealed a brief communication recording a case operated on by A. Martin, which must be mentioned; in a labor associated with cicatricial stenosis of the os, incisions were made, the wound margins stitched, and the uterine artery ligated to arrest profuse hemorrhage. It should also be stated that suturing of the wound surfaces has been performed in discission of the cervix in gynecological cases.

[The above is worthy of careful study, for the reason it shows a remarkably heroic remedy in circumstances which, on this side of the "Pond," are exceedingly rare, outside of a decided cicatricial state of the cervix. (And it is well to remark that a cicatricial cervix, in unimpregnated condi-

tions, to all intents and purposes becomes markedly changed as term approaches.) We can only feel that other methods are to be preferred to the one advocated by Dr. Skutsch. Fortunately the conditions, even from the standpoint of Dr. S., calling for these procedures are rare, and it is questionable whether the risk to the mother is fairly worth the possible death of the child. In skilled, familiar hands it may be. No statistics are presented to show results.—ED. REVIEW]—*Weekly Medical Review.*

Microscopy.

The Spectroscope.

ONE of the most practical results in metallurgy shows the high value of the prismatic test. The examination of the spectrum of carbon has led to a revolution in the manufacture of Bessemer steel. Formerly it was very difficult to determine at what precise moment the oxygen of the air had burned out the carbon and the silicon, a process necessary to produce an excellent steel. Experts who watched the flame and could ascertain by long experience, with more or less exactitude, when the proper moment had arrived, were few and expensive. To the uninitiated no difference of the flame is visible. By the aid of the spectroscope this difference can be made out with the greatest ease and exactitude. A cursory inspection of the flame spectrum and its various phases reveals a certain number of absorption bands and bright lines, and informs us of the exact moment when the iron mass has been converted into excellent steel, when the admission of air and its oxygen is stopped immediately, and the process is finished, with invariably good results. The spectrum of Bessemer steel may be examined in the work of Henry E. Roscoe, second edition, p. 164.

THE SPECTROSCOPICAL ANALYSIS OF THE BLOOD.

In the past, and before the spectroscope had entered into the service of medicine, the microscope was, to a great extent, relied upon to demonstrate the presence and changes of blood. At the same time the chemical arsenal was ransacked to furnish reactions for the detection of traces of altered blood. Whoever ponders over the painfully tedious

and oftentimes faulty proceedings devised and carried out for this purpose, will not fail to hail and appreciate the modern methods of investigation. Chemical analysis is difficult, and often impossible with very minute traces of blood. The microscope can demonstrate blood only within comparatively narrow limits.

So long as the blood-corpuscle can be obtained, and if it is a solitary one only, if well defined, the presence of blood can be made out; but when, by some chemical or other means, the cell-form of the blood-corpuscle has been destroyed, when, by a process of disintegration, every trace of its contour and outline has disappeared, when it has lost all characteristics of blood, and is only presented to us in extremely minute proportions, as an amorphous substance, or as a coagulated, physiologically altered pigment, or in an offensive and putrid mass, then the highest magnifying powers of the microscope become perfectly useless; it has arrived at the limits of its demonstrating capacity, and it delivers, without hesitation, the further solution of inquiries into the hands of the spectroscope, and it is just here that its analytical powers prove of the greatest importance and usefulness.

THE BLOOD.

The blood-corpuscle is the highest developed organized cell known. The chemical composition of the blood is calculated according to the following formula: E_{600}. H_{960}. N_{154}. Fe. S_3. O_{177}, leading to an atomic weight of 13280. Its atomic weight and complex composition are the marvel of the analytical chemist. The discovery that these blood-corpuscles contain a crystallizable substance is of recent date. The first observations were made by Reinhart, Koellicker and Funke, and still later by Lehman, Hoppe-Seyler and others. Lehman gave to this crystallizable albumen the name of "Blutcrystalle"—blood-crystals. This physiologist was, however, but partially aware of the great physiological importance and function of these crystals, for in his "Handbook der Physiologischen Chemie," he says that, owing to the entire absence of knowledge respecting the chemical constitution of this substance, we are unable to form any opinion regarding its genesis.

Even as recently as 1858 Rudolph Virchow did not assign to these crystals any special function. He was very well aware of the fact that they behaved in certain respects

like organic substances, inasmuch as they become larger through the action of certain agencies, and smaller through that of others, without change of form. He was also aware that the form of crystallization was different in different animals, and he adds "that hitherto it has not been possible to discover any satisfactory reason for their existence, or to obtain any insight into the nature of their substance."

And yet he was aware that these crystals were affected by oxygen and carbonic acid precisely as the blood is; that they become of a bright red color with oxygen, and dark and bluish red with carbonic acid. In common with the former erroneous views of writers upon this subject, the coloring pigment of the blood, "Der Blutfarbestoff," was described by him as haematine, yet Lehman had already shown that this insoluble substance, so rich in iron, is not found as such in the blood, but that this haematine is in reality a product of decomposition of the true pigment of the blood, which is now known and designated as haemoglobin, haemato-crystalline and cruorine.

The great practical importance which attaches itself to the solution of the inquiry regarding the nature and function of this substance, must be my apology for making it the subject of some wider and general remarks.

The spectroscope, which may now be considered as having fairly entered into the service of medicine, has thrown a flood of light upon this and kindred inquiries, and has revolutionized many theories formerly entertained regarding the mysterious processes within our economy, and the results already obtained can not fail to exert a most important influence upon our conception and treatment of disease.

Recent researches, aided by spectroscopic observation, have demonstrated, that the blood-crystals, especially the haemato-crystalline, are actively at work in the economy to sustain the processes of respiration, oxidation and oxygenation; that they are the true and only carriers of the oxygen of the blood; that through their agency alone is the oxygen of the air attracted to and bound to the blood-corpuscles, which by the heart's action are propelled and carried far into the intricate recesses of the capillary system; that there they part or give up their loosely bound oxygen to the oxidizable tissues, with which they form energetic combinations, that in exchange for their oxygen thus given up, the haemoglobine or haemato-crystalline combines energetically with carbonic acid, the product of combustion, which acid

they carry back to the heart and finally to the lungs through the venous tracts, for final elimination. Freed from carbonic acid, they absorb again and again all oxygen they meet in the lungs, and by the heart's action this vital gas is again carried forward in its endless path of circulation. It has been fully demonstrated by experiments that so long as the haematо-crystalline remains normally the same, in quality as well as quantity, the supply of oxygen to the economy is subject to relatively small oscillations, and with the increase or decrease of this wonderful substance, or with any alteration of its integrity, rises or falls the degree of vitality in an individual's life. That it is beyond any question the hæmato-crystalline, and not any other substance of the blood, which enters into and sustains the vital exchanges between oxygen and carbonic acid has been fully proved by spectrum analysis.

Haemato-crystalline in solution is able to absorb oxygen, as well as carbonic acid, with the greatest avidity. It can exist, like the blood itself, in a double state of oxidation, corresponding to arterial and venous. It can be oxidized and deoxidized at pleasure by chemical, and also by mechanical means. It presents the same absorption bands as blood does when examined spectroscopically, and these blood bands are also found in the exact part of the spectrum ; it enters into precisely the same combinations with the irrespirable gases, and all and every optic appearance which blood presents when acted upon by chemical agents, are also faithfully reproduced when the same agents act upon a solution of haemato-crystalline.

As to the approximate quantity of this haematо-crystalline, experiments made show that, in the total blood mass, nine to twelve per cent. is contained in the moist corpuscles ; freed from serum, it rises from eighteen to twenty per cent.

THE HAEMATO-CRYSTALLINE AS SUCH IS NOT FOUND IN THE HUMAN BLOOD.

Considerations that would lead us too far from our present subject, and require far more space than can reasonably be spared for this paper, forbid a more detailed account of its normal state in the blood. According to the best authorities, it is there joined to an alkali. When we reflect that the blood is an alkaline fluid, we will at once assent to this proposition, especially so, when experience shows us that this substance can only be obtained in crystalline form,

when the blood loses its alkalinity and changes to a state of acidity. Thus the prolonged passage of a current of oxygen gas through a blood-solution is one of the means to obtain the artificial crystals.

Preyer thinks that it is joined to potassa in the blood, on account of the predominance of potassa in the blood-corpuscles, whilst soda predominates in the serum. We might say, then, that it exists there as a potassa haemo-globinate.

Perhaps I may digress for a few moments to refer to the rapidity with which oxygen is absorbed and given up again by means of this haemato-crystalline. We may refer to Pflueger's highly instructive experiments with dogs. He forced these animals to inhale pure nitrogen gas; for thirty seconds the highest point of dyspnœa was reached. At this point some blood was abstracted under great precaution, and tested for oxygen. It was found that its quantity of oxygen had been reduced to a minimum, being 1 to 2 per cent., whilst the blood abstracted from the same animal immediately before it inhaled the nitrogen was 18.6 of oxy-gen. As soon as these animals were permitted to inhale again pure air, the dyspnœa disappeared, and they seemed as well as ever.

In hibernating animals the quantity of haemato-crystalline diminishes gradually during the winter's sleep, and is re-gained at the return of spring.

One of the most wonderful qualities of this substance is its high atomic weight, the highest known. It is computed by I. Schmidt and Hoppe-Seyler to be 13,280. It is one of the most indestructible substances known, resisting, ac-cording to Thudicum, the destructive powers of decomposi-tion and putrefaction. In most solutions it retains its characteristic features, especially its optic properties. I look upon this stability and indestructibility as the principal factor in animal life, and any pathological condition affecting their stability, or their integrity, must also affect the stability of life itself.

Modern investigations have added but additional proof to this assertion. In many instances of disease, most notably in intermittent fever, the destructive microbes select the interior and environs of blood-corpuscles, and health is slow to return unless we succeed in rescuing the integrity of the haemato-crystalline.

Let me here say a few words regarding the inquiry which is so often made, whether we are able to tell in a given case by the spectrum test whether the blood comes from man or not. We can not, with our present knowledge and means, decide the question in a direct manner. The blood of all animals gives the same spectral appearance. They all have hæmato-crystalline in their blood; even the lowly rain-worm yields hæmato-crystalline, which proud man claims as his exclusive inheritance. A. Rillet found this substance even in the red larvæ of the feather-fly, *Chironomus plumosus*. These flies are not parasites; they suck no blood. This proves that the red coloring pigment which forms in their bodies, originates from purely vegetable substances. Chlorophyl gives an absorption band in the neighborhood of sulphurated hydrogen spectrum. We may at times give a negative answer. The microscope can tell us where the size and form of the corpuscles differ from those of man, and whether such blood belongs to inferior animals—for example, the frog's blood. It can also, by the peculiar form of crystallization, tell us what it is not. We know that human blood and that of many carnivorous animals crystallizes in prisms. The blood of the guinea-pig, of the rat, the mouse and other rodents crystallizes in tetrahedrons. The blood of the squirrel forms hexagonal tablets; hamster blood crystallizes in rhombohedra, and fish blood in fine prismatic needles. The blood of various animals differs, also, in solubility.

Human blood solves very readily; the blood of monkeys, hedge-hogs, and others, solves equally easily. The blood of the guinea-pig, the squirrel, the rat and other rodents, on the contrary, solves with great difficulty. There is also great difference in the sinking capacity of the corpuscles. Horse blood, for example, possesses the greatest sinking power, forming rapidly a layer of blood corpuscles in the serum when collected in a glass vessel. Some blood will crystallize rapidly; another with far greater difficulty. These facts may assist to answer the inquiry as to the identity of human blood.

I have purposely given a more ample description of this blood crystallization, the only crystallizable albumen known, because upon this important knowledge will rest the possibility to understand what follows.

OPTIC RELATIONS OF BLOOD AND ITS CRYSTALS.*

When undiluted blood is spectroscopically examined, we observe a dark spectral field, relieved only by a nebulous band in the red part of the spectrum near A. Examine carefully this spectral appearance on the spectroscopic diagram No. 3. The wood-cutter made this line too thick. If we dilute the solution we observe that light between C and D emerges out of darkness. This evolution of light is rapid. If we continue to dilute until the D line emerges from darkness and becomes visible, using, of course, sunlight, we observe the appearance of green light between the lines B and F. Continued dilution favors the expansion of the green both to the right and to the left of the E line. At this stage we observe a broad, black band between the green and the red, which is rather indefinite and blurred in its outlines. Its position is between the lines D and E, and when the solution is now carefully further diluted, we observe the green tint dividing this broad band into two distinct bands. The one near the D line is narrower, but very finely and deeply shaded, and definite in outline, whilst the second, near E, is broader but less deeply black, and rather hazy in its outlines. These are the two bands of Stokes, representing blood in a state of oxidation. We continue to dilute carefully, and the spectrum clears up, at both its extremities, permitting all spectral tints to appear in full brilliancy. Further dilution from this point has the effect to contract the bands and make them hazier until finally they disappear altogether. The limit is, however, such that $\frac{1}{8000}$ part of a grain of blood may yet be spectroscopically demonstrated. Solutions of hæmato-crystalline follow precisely the optic phenomena of blood.

For those who desire to convince themselves of the correctness of the above statement, we would recommend to employ the blood of healthy man or animal, to measure the amount of water necessary, to proceed from step to step, especially the quantity necessary to produce the oxygen blood bands in their full purity. And hereby hang several lessons:

First—These peculiar spectral phenomena just described

* Though we are not able to give the cut of the diagram, we, nevertheless, print the explanation of it rather than mutilate the article, which we regard a most valuable one, by omitting it. The demonstration, however, without the cut is of service.—ED.

are not produced by any other fluid or substance known; and where they appear in the succession pointed out, we can confidently claim that the presence of blood or of haemato-crystalline has been made out.

Second—We can fairly judge of the blood under examination, whether it is in a normal or abnormal condition, anæmic or otherwise. Blood deficient in haemato-crystalline will require less water to bring about the above described spectral phenomena. If so, we may be sure that the processes of respiration, oxygenation and oxidation are imperfectly performed, and vitality is at a low ebb. This procedure has, therefore, not only qualitative, but also a quantitative significance.

Certain precautions, which will be easily understood, are necessary to avoid errors. We must carry on the observations precisely under the same conditions, with the same spectroscope, the same source of illumination, same temperature, the same distance of the glass tube or vessel from the slit, and the same relative width of the slit; in short, says Hoppe-Seyler, "nothing at all must be changed, except the solution or fluid to be examined." The oxidized blood bands are seen on the diagram No. 1.

DEOXIDIZED OR VENOUS BLOOD.

We have already adverted to the fact that blood may exist in a double state of oxidation. When saturated with oxygen we call it oxidized blood. It corresponds to the arterial blood in the living body. It is also said to be oxyhæmato-crystalline, or oxyhæmo-globine, or oxycruorine. To this state, we have seen, corresponds No. 1 on the diagram on chart. But the blood can be deprived of its oxygen by mechanical, as well as by chemical, means. We can use the exhausting pump mechanically. Chemically we use such reagents which appropriate the oxygen. These are called reducing agents. Ammonium, sulphate, tin oxidul and others may be used for this purpose. If we observe the spectrum whilst using these agents, we immediately witness a change. "A change has come over the spirit of its dream." The two oxygen-blood bands disappear and make room for a broad, dark band occupying the space between D and E. This band is called the reduction band, also the band of Stokes, who first saw and described it; it may also be called, with great propriety, the band of deoxidized blood.

Blood in a state of deoxidation is still blood, in full integrity and vitality, for all that is necessary to restore its two oxygen bands is to shake the blood up with air, or add some substance that will give up its oxygen to the blood. Solutions of hæmato-crystalline behave in precisely the same manner. This process can be repeated many times with the same results.

Remember these facts, for they are of the greatest importance in spectrum analysis. Suppose we are called upon to analyze spectroscopically a specimen of blood that has lost this most important qualification; that it can not be reduced or deoxidized, or that it is in a reduced condition, and can not be made to return to its normal oxidized condition: would you not at once conclude that some powerful chemical agent must have acted upon it and destroyed its physical integrity? Surely, such a mode of reasoning would be logical. We shall presently learn that this reasoning rests upon well-ascertained facts.

AFFINITY FOR IRRESPIRABLE GASES.

Wonderful as are the functions of the crystalline element of blood, it possesses other and dangerous qualities whereby destruction to life is invited and facilitated. They have an exceedingly energetic affinity for irrespirable and poisonous gases, with some of which they enter into close and inseparable combinations, thereby sacrificing their own integrity and life-supporting power forever. Some of these poisonous gases deprive the hæmato-crystalline of the blood of its power to absorb and fix oxygen; others seize and consume all the oxygen of the blood to satisfy their own keen affinity for this gas; others cause a cleavage, a true chemolysis of the blood hæmato-crystalline, combining with its alkaline base, thereby setting this crystallizable substance free, whilst still others cause several of these effects to take place at one and the same time.

When such a fundamental and vital change has taken place, the blood's life function is at an end. Often it is not even necessary that the entire blood mass should have been disintegrated. We understand now how it happens that when a man inhales the poisonous and much-dreaded fire-damp, the mephitic exhalation of the coal-mines for example, he may be brought to the surface alive, may linger on for days, and yet be beyond the possibility to recover, even when he is plunged in an ocean of oxygen. Such was the

condition of many of the victims of the accident a few years ago in the collieries of West Pittston, Pa., for in these cases fatal injury was sustained by the crystallizable albumen of the blood.

And here comes in another practical lesson. When a cleavage, or chemolysis of the blood has taken place, its disintegrated elements become foreign bodies, liable to work out extensive mischief, unless eliminated and carried from the system.

You may naturally ask, Is there no remedy for this condition of affairs?

In answer, let me refer you once more to Preyer's experiments with the dogs, and how rapidly their oxygen was consumed. The safety of the patient must depend often upon the speedy manner the defect is made good. This can be done by transfusion, sending airable blood through the arteries and veins. Perhaps some day we will discover how to utilize the haemato-crystalline solutions for this purpose. By it we supply the asphyxiated system with that substance by which oxygen can be carried and respiratory and oxidizing functions become possible. These considerations will come up with renewed force when we shall speak of anæsthetics, especially of those that produce insensibility by abstracting the oxygen from the blood and suspending one of the most important of the organic processes, that of respiration. You will now well understand how a fatal result may ensue from such agents, that greedily appropriate the oxygen which the blood may have stored up, and which, in addition, still further destroy the integrity of the same in a manner to paralyze its vital function. I have called your attention already to the fact that we can obtain some of those combinations in a crystalline form, to-wit: the prussic acid, the carbonic oxide, and the nitric oxide, hæmato-crystalline. These combinations are far more stable and far more difficult to disassociate than the oxyhæmato-crystals.

These changes are faithfully registered in most instances, and we will, further on, see what great value spectral analysis has in forensic medicine.—*The Microscope.*

Medical Practice Act in Maryland.—The Maryland Legislature has just passed a Practice Act similar to that of Illinois.

Gleanings.

A Practical Test of a Climate for a Phthisical Patient.—Dr. Otis, of Boston, concludes in an article in the *Boston Medical and Surgical Journal* of December 15, 1887, that in whatever climate one finds his lung trouble improving steadily, there he should remain, not only until all signs of mischief disappear, but, in many cases at least, as long as he lives. I feel convinced that this is the safest and wisest plan, and I think that physicians of experience are gradually growing to this opinion. This is especially true of the Colorado climate, which is such a radical change from the one the patient is likely to come from. I believe the slow improvement, or lack of any improvement, in many cases is due, partly, at least, to the worry over the enforced exile, and eager watching for the time when they think they will be able to return to their homes. It is often noticeable how quickly and permanently those improve and recover who take up their residence in Colorado, and settle down to permanent living there, with their friends and family about them. The contrary is also observed with those who make it a mere health resort, and are separated from their family and friends: as, for instance, a wife from her husband, or a daughter from the rest of her family.

What is a Drug?—From the *Boston Medical and Surgical Journal* of December 8, 1887, we learn that a case came up in the Superior Criminal Court, December 6th, before Judge Bacon, on the interpretation of the Sunday law passed at the last session of the Legislature, as to the meaning of the word "drug," and what it includes. An apothecary was tried for a violation of the law. It appeared in the evidence that the violation consisted in selling a cigar. Counsel for the defendant claimed that a cigar was a drug, and came within the section of the law relating to drugs and medicines. In support of his view of the case, he cited various authorities, and quoted freely from Worcester and Webster as to the definition of tobacco. In his instructions to the jury, the judge said that if they found that tobacco was a drug or a medicine, then they must acquit; but if they found that it was not a drug, then the defendant would be guilty. The jury after being out a short time, returned a verdict of not guilty.

Amputation of Fingers under Cocaine.—In those cases of injury to the fingers in which amputation is necessary, cocaine has been used by Dr. North, of Brooklyn, according to the following method: On the entrance of the patient the wound is thoroughly saturated with a four per cent. solution of hydrochlorate of cocaine before any examination is made. After waiting a few minutes for absorption to take place, the injury can be examined and the wound probed with entire satisfaction, as the patient makes no resistance, because he suffers no pain. Flaps may then be cut, following each considerable incision with a few drops of cocaine solution, also using it occasionally to wet the entire part. Ligatures may be applied, and the bone sawed as necessity may demand. After thoroughly irrigating the wound with antiseptic solution and providing for proper drainage, sutures may be applied and the wound dressed according to the principles of antiseptic surgery.

The method is simply one of saturating the wound with the cocaine solution—the cocaine is not injected, anesthesia being sufficient without the use of the hypodermic needle.

The Perspiration.—The result of elaborate research made by M. Peiper yields the following conclusions: (*Lancet*) The perspiration is more concentrated on the right side of the body; this observation is in accordance with that of Reinhardt; it would be interesting to know whether the opposite was the case in the left-handed. The palm of the hand sweats four times more than the skin of the chest, and the cheeks one and a half times as much. There is a slow increase in the sweat in the afternoon, especially obvious from eight to twelve o'clock at night. After midnight there is a diminution. Feeding has but little influence on this function. Elevation of the surrounding temperature increases the perspiration, and variations of the hygrometic state of the atmosphere have an immense influence on the function. The quantity of water evaporated in a quarter of an hour from a cutaneous surface twenty-five centimeters square, in a normal individual, is about 1.76 of a gramme. In infants the quantity is generally less than in adults. The weight of the body and sex have no marked influence on the perspiration.

Apparatus for the Sick-room.—Mrs. E. P. Bailey has invented a contrivance for the convenience and comfort of

the sick, which is very highly spoken of in the hospitals where it has been tried. Two iron sockets are firmly attached to the sides of the bedstead by screws, and into these are fitted short poles, and between the poles is suspended a horizontal bar, also fitted into clamps and adjustable to any height above the patient lying on the bed. From this bar hang a pair of strong straps with grips, and these can be moved from right to left at will. By grasping these straps the sick man can utilize the strength of his arms to lift himself up, to change his position, to turn over and to allow the bedding to be changed. There are a variety of attachments to the invention which extend its usefulness almost indefinitely. One is a rest for the leg, in which a broken limb can be placed while it is being dressed. It is only necessary to unscrew the sockets attached to the bedstead and change their location to utilize this. Another is a small table for medicine, book, anything a patient wants, within immediate reach. Another is a curtain rod, likely to be especially serviceable in hospital wards to avoid a draught, to shut out the light or to afford a degree of privacy.—*Syracuse Herald.*

Insomnia.

While insomnia or inability to sleep is not a distinct disease, it is at times productive of much distress, and interferes so seriously with the proper performance of the functions of the various organs of the body, that the best efforts of the physician are demanded for its relief. Insomnia is generally the result of prolonged mental study or intense excitement. At other times it is due to the action of malaria upon the nervous system. It not infrequently follows the excessive use of tea, tobacco, alcohol, etc., due to arterial and nervous excitement caused by these agents.

Pathologically, all cases of insomnia can generally be divided into two classes, as that which results from nervous exaltation, characterized by an increase in the force and frequency of the pulse, and that which results from nervous depression with a diminution in the volume of the pulse, often followed by an anæmic condition of the cerebral arterioles. The treatment, to be successful, must vary with the cause and pathological conditions present. Physicians

are well aware that opium, chloral, alcohol, etc., are often used, and sometimes give relief; but the patient becomes habituated to the drug, must have the dose increased, and thereby a habit is formed, for which the best efforts of the physician are called on to check, a habit which is worse than the sleeplessness for which the patient was treated.

Bromide of soda and also the potassium salt is often used, and great benefit has resulted. In the treatment of neurasthenia great benefit has resulted from the use of the bromides of soda and potash, especially when in combination with a salt that will counteract the depressing effects resulting from the use of bromide. Such preparations are the bromo-soda and bromo-potash, prepared by Wm. R. Warner & Co., and in the treatment of nervousness, debility and neurasthenia, which can generally be ascribed to insomnia, they are especially efficient and agreeable. The bromo-soda preparation contains thirty grains of bromide of soda and one grain caffein. The bromo-potash preparation contains twenty grains of bromide of potash and one grain of caffein. Physicians will readily see that the merits of these two preparations need hardly be questioned, and they can not be disappointed in the therapeutic effects resulting from their use. They are put up in granular form, which makes a delightful effervescing draught, and gives the patient a desire to take these preparations, which are extremely palatable and beneficial. The preparation of bromo-soda was partly suggested by the late Dr. J. S. Jewell. Physicians have met with unfailing success in the use of bromo-soda in the treatment of nervous headache and the conditions resulting from an overworked and run-down system. The therapy of the preparation need hardly be questioned, as by its use the patient feels a relief not given by any other preparation given for the same symptoms.—*New England Medical Monthly.*

Book Notices.

THE HYGIENE OF THE SKIN; OR, THE ART OF PREVENTING SKIN DISEASES. By A. Ravogli, M.D. 8vo. Pp. 399. Cincinnati: Central Medical Publishing Co. Price, $3.

This work has been written by an eminent Cincinnati physician, and published by a Cincinnati publishing com-

pany, the mechanical execution of the volume, in the way of the quality of the paper, the type, press work and binding, reflecting great credit upon the company issuing it.

The author, in a preface, says: "I have often thought of publishing a few observations on the etiology of diseases of the skin, since I find the books do not sufficiently reflect our present knowledge of the conditions of dermatology. Some questions were proposed to me by my own pupils who, interested in the study of dermatology, were desirous of learning from me many things concerning the causes of different diseases.

"My patients, also, have questioned me in the persistent way known to every physician, 'How can I get rid of this eruption?' 'I never had anything on my skin;' 'Can I drink beer or coffee?' 'Can I eat butter?' etc.

"These questions from different parties, all pointing in the same direction, gave me the idea of publishing a few remarks on the hygiene of the skin, and to develop from the researches of science, and from my clinical experience, the doctrine of all causes capable of producing skin eruptions.

"Under the guidance of science, I have endeavored to explain every application to the skin, so that it may result in clearing and maintaining the complexion, and preserving the skin with its appendages, the hair and nails. A good complexion is intimately connected with a healthy system, so that a diseased body can not hope to have the fresh and fair complexion, which is so desirable for the beauty and harmony of the physiognomy."

We have thus quoted largely from the author's preface, that our readers, from his own language, may understand the object of the work. It is the only work with which we are acquainted that is devoted to the hygiene of the skin. The text-books upon dermatology contain generally a few cursory remarks on preserving the health of the skin, but they are usually made in an incidental way, are very indefinite, and are of very little value. Those, therefore, who have wished to study the hygiene of the skin, unable to find any scientific work upon the subject, have either been under the necessity of going without the desired information, or seek for knowledge in the unscientific books of a certain phrenological publishing firm.

The work will undoubtedly fulfill a want. We are of the opinion that the diseases of no organ can be properly understood or scientifically treated unless there exists famil-

iarity with the laws governing that organ in health; unless it be known what conditions are necessary for it to continue in health. The anatomy of the skin is set forth in anatomical works, and there will be found some explanation of the physiological functions of the skin in treatises upon physiology, but there will be discovered, even among many physicians, remarkable ignorance of the skin as one of the great organs of the body which plays a most important part in the maintenance of the health of the individual—its own normal state depending largely upon the normal condition of fellow organs.

Dr. Ravogli will receive the thanks of his professional brethren everywhere for this work upon the hygiene of the skin. It exhibits learning and research in a department of medicine that has been but little understood heretofore by the mass of the profession. Skin affections have constituted a class of diseases that the majority of physicians have felt that they knew but little about; and this has been due, no doubt, largely to the fact that, knowing little about the skin in health, they could discover nothing but empiricism in the modes of treatment of dermatologists, and, consequently, they have felt no incentive to study them. But the study of such a work as the one before us will certainly create an interest in the study of dermatology that has not been before experienced. It seems to us that Dr. Ravogli's work will place dermatology upon a scientific basis that hitherto it has not had.

The author in the work, having explained the anatomy and physiology of the skin, treats of morbid impressions upon the skin, diatheses, diseases which are produced by a particular virus or virulent impression, physiological individual conditions, influence of diet in the production of skin diseases, external causes of skin diseases, water upon the health of the skin, and many other subjects which we have not space to mention.

The work will be sent by mail by addressing the Central Medical Publishing Co., 172 and 174 Elm Street, Cincinnati, O.

THE YEAR-BOOK OF TREATMENT FOR 1887. A Critical Review for Practitioners of Medicine and Surgery. Contributors: J. Mitchell Bruce, M.D., Peter McDude, M.D., Alfred Cooper, F.R.C.S., Malcolm Morris, F. R.C.S.E., Sidney Coupland, M.D., Edmund Owen,

F.R.C.S., Sir Dyce Duckworth, M.D., Sidney P. Philips, M.D., George P. Field, M.R.C.S.R., Douglas Powell, M.D., W. J. Walsham, F.R.C.S., Chas. Henry Ralfe, M.D., and six or eight other medical gentemen. 12mo. Pp. 336. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: Robert Clarke & Co. Price, $1.25.

Though the work is small, yet the object in its publication is to present to the practitioner a complete account of all the more important advances made in the treatment of disease in each department of medicine and surgery by a gentleman who gives especial attention to the department to which the malady under consideration belongs. The medical literature of all countries has been placed under contribution, and the work deals ith all the more important matters relating to treatment that have been published during the year ending September 30, 1887.

We will make a quotation or so in the way of illustrating the scope of the work. Dr. R. Douglas Powell presides over diseases of the lungs and organs of respiration, to which some twenty-seven pages are devoted. In considering the effects of various remedies in lung affections, those of antifebrin in phthisis are thus described: "Cauldwell has investigated in thirty cases the effect of antifebrin in the feverish attacks of phthisis, and arrives at the following conclusions: 1. Antifebrin is the best drug with which to control the chills and fever of phthisis. With it we can at once check these depressing symptoms. 2. It does not produce the unpleasant effects of quinine, salicylic acid, antipyrine, thallin or resorcin. 3. Chills, collapse or semi-intoxication are not caused by it. 4. In many patients it induces sweating. 5. It diminishes the frequency of the pulse, and usually strengthens the heart's action. 6. Occasionally it produces cyanosis. This happened but twice in thirty cases. 7. It does not interfere with digestion; but, on the contrary, increases the appetite. 8. Even when the stomach is in an irritable condition, it can be retained. 9. It increases the secretion of urine in the majority of cases. 10. It tends to quiet the nervous system and produces a feeling of 'well-being' in the patients.

"It is to be noted that his cases were obtained from all classes, and the patients were widely different in habits and age, so as to avoid errors from differences in these respects."

Mr. Frederick Treves is over the Department of General

Surgery. Under the head of treatment of wounds he says: "It appears from a perusal of cases published in various quarters of the globe that the carbolic spray is still further sinking into disuse for the treatment of operation wounds. Of the complete listerian dressing still less is heard. Corrosive sublimate, although still very extensively employed, does not appear to be received with the favor it once held. Its poisonous character, its action as an irritant, and its effects upon steel instruments, are once more urged against its very general use.

"Solutions of boric acid are more extensively employed, especially for washing out large cavities, such as the abdomen and thorax. Salicylic acid is in much favor as an unguent in cases where an antiseptic ointment is required."

Physicians will find the work a very useful one indeed. Though small, there is crowded into it a vast amount of most useful, practical information in nearly every department of medicine and surgery, giving the very latest views of the most eminent men of the profession as regards remedies and the treatment of diseases.

OPHTHALMIC SURGERY. By Robert Brudenell Carter, F. R. C. S., Ophthalmic Surgeon to St. George's Hospital, and to the National Hospital for the Paralyzed and Epileptic, and William Adams Frost, F. R. C. S., Assistant Ophthalmic Surgeon to St. George's Hospital, etc. Illustrated with a Chromograph and Ninety-one Engravings. 12mo. Pp. 554. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: Robt. Clarke & Co. Price, $2.25.

This work belongs to the series of "Medical Manuals for Practitioners and Students of Medicine," which the Messrs. Lea Brothers & Co. have been having for some time in process of publication. The works composing this series, as we have mentioned before. are made in size, arrangement, etc., exceedingly convenient for the use of students in attendance upon lectures, and for reference by practitioners of medicine.

The authors say that they have endeavored in this work to place before the profession a concise account, as complete as the space at their disposal would permit, of the present state of ophthalmic surgery. They have succeeded admirably, for we know of no work upon diseases so well adapted

for reference by physician and for the use of students in attendance upon lectures. For the student it contains all the details to which he has time to give attention. The subjects, too, are so systematically arranged that it requires but the shortest possible time to refer to any one and learn all about it. Such a work, it seems to us, is calculated to relieve a student from the necessity of taking notes of the lectures upon the subjects of which it treats; for, containing the very latest information on each subject, and treating it as fully as a lecturer would have time to do, a few minutes' review at his room would place a student in full possession of all the points gone over in a lecture without reference to notes.

The work, we feel sure, will be held in high esteem by students and by such physicians as do not make a specialty of the treatment of eye affections. It treats as fully the diseases of the eye as a general practitioner would consider desirable. It presents all the facts that are necessary to be known, making but little allusion to conflicting views of different authorities. An examination of the work makes us feel like entering again upon the study of ophthalmology, in order to post ourselves upon the advances made since our student days, so attractive is the appearance of the volume.

THE SURGICAL DISEASES OF THE GENITO-URINARY ORGANS, INCLUDING SYPHILIS. By E. L. Keyes, A.M., M.D., Professor of Genito-Urinary Surgery, Syphilology and Dermatology in Bellevue Hospital Medical College; Consulting Surgeon to the Charity, the Bellevue, and the Skin and Cancer Hospitals, etc. A Revision of Van Buren and Keyes' Text-book upon the Same Subjects. 8vo. Pp. 704. Cloth. New York: D. Appleton & Co. Cincinnati: R. Clarke & Co. Price, $5.

This work, as stated upon the title-page, is a revision of Van Buren and Keyes' text-book upon the same subjects. "Time and surgical advance," says Dr. Keyes, "have destroyed, in great part, the value of the original treatise, upon which this revision is founded, making it an unsafe guide as a text-book upon certain subjects. The original book was issued in 1874, and since that date until the present time has received no material alteration. The whole subject of litholopoxy has had its birth since that date;

supra-cubic cystotomy has been restored to new life; the surgery of the kidney has been constructed anew, and radical changes have been introduced into the surgery of the tunica vaginalis and that relating to the treatment of varicocele. Many minor advances have been made by the profession all along the line followed in this treatise."

Dr. Keyes, in fact, claims to have made the work an altogether new one; and that, as it stands, it is an exhibit of his views upon all the subjects considered. There is but one chapter of the original work written by Dr. Van Buren that has been left standing without change. The plan of the book, however, has been scrupulously adhered to, and its scope remains unaltered.

Many may be disposed to think that a work having a title like this one is a work upon venereal diseases; but such, by no means, is the fact. Venereal diseases are treated in it—and very satisfactorily, too—but only as forming a part of the genito-urinary affections. There will be found, treated at length, all of the diseases to which the penis, urethra, bladder, prostate gland, testicle, etc., are liable. Among the several hundred maladies may be mentioned stone, stricture, retention of the urine, deformities, injuries, atrophy and hypertrophy of the prostate, the various forms of prostatitis—acute, chronic, parenchymatous, follicular, tubercular, etc.—hernia of the bladder, rupture of the bladder, floating kidney, kidney stone, nephritic colic, erysipelas of the scrotum, etc. Among the very numerous affections discussed, many are met with frequently by every practitioner, while some, as is the case with some of the diseases of the heart and brain and other organs, present themselves only occasionally to the attention of the family physician.

The work has been very carefully prepared by one who makes a specialty of the diseases treated in it, and has enjoyed a very large experience. It can be depended upon as presenting the very latest information upon the various subjects of which it treats. We feel sure that there is not another work published in this country or in Europe that treats so thoroughly and satisfactorily all the various diseases to which the genito-urinary organs are subject.

On the Animal Alkaloids: The Ptomaines, Leucomaines and Extractives in Their Pathological Relations. Being a Short Summary of Recent Researches

as to the Origin of Some Diseases by or through the Physiological Processes Going on during Life. 12mo. Pp. 61. Pasteboard. Philadelphia: P. Blakiston, Son & Co., 1021 Walnut Street. Price, $1.

This is a small work; but a very interesting and valuable one. At this time, more even than at any previous time, the causes of disease are being investigated. The microscope has opened up new fields of study in pathology, and many are actively employed in efforts to develop all the facts possible. Says the author: "The time appears to have come when it is desirable to open up new lines of thought and of practical departure in pathology, which may lead us to entertain broader, or, at any rate, less narrow views than those we have been accustomed to entertain as to the origin of some diseases."

"What are ptomaines," we are often asked, "that articles in the journals speak so much about?" Gautier has shown that in dead animal tissues, processes of putrefactive decomposition set in, by which certain alkaloids are elaborated from the proteid substances, which, by the late Selmi, of Bologna, have been called "ptomaines." The poisoning or intoxication of the animal economy with these—its own products—not unfrequently seems to bring about these.

We advise students, and physicians who wish to keep pace with medical progress, to procure this little work from the publishers and diligently study it.

Editorial.

CINCINNATI WATER-WORKS.—If the Queen City of the West has no medical gentlemen, just at this time, distinguished for learning and ability in medicine, it has a few, at least, of great versatility of talent. Among the most conspicuous of these is Dr. T. C. Minor. This gentleman, besides being an eminent physician, is a noted Democratic politician, distinguished poet, able novelist, learned scientist, etc. He has already published several novels, and we understand that he is engaged writing another, which will soon be issued. We have not heard of his having as yet gotten out a volume of poems; but as poetic effusions by him appear often in the *Lancet and Clinic*, we think it will not be long until a book of his poems will be on the mar-

ket. We believe that it is the custom generally for poets to have their ditties and songs appear first in some periodicals of the day, and afterward collect them together in a book.

Among numerous scientific articles that he has contributed recently to the pages of the *Lancet and Clinic* (that excellent journal seems to be his organ) is one on "Adulterated Lard," and another entitled "Our Chalybeate Water Commission." In the first he expressed himself as opposed to a bill pending in the National Legislature, proposing to punish those who were detected in mixing cotton-seed oil with swine fat and labeling the compound "pure lard." Mixing the vegetable oil with the hog grease, he said, made the latter better—that adeps contained trichinæ and other unhealthy articles, etc. The water article was copied in a Sunday edition of the *Commercial Gazette* (many of his articles seem thus to be copied in the aforesaid paper). It has attached underneath the heading, in small type, a quotation from Shakespeare's "Merchant of Venice"—"There be land rats and water rats, water thieves and land thieves." This quotation proves that the Doctor is literary as well as scientific.

In his water article the Doctor shows plainly that he believes the members of the Board of Public Affairs are men of very limited intelligence, for he says that their knowledge of water is, for the most part, "limited to the two considerations, that it is good to wash in and good to fish in." In proof of this assertion he states that the manufacturers of the teeming city, with its thousands of mechanics, were informed that they must economize in their aqueous supply and waste no steam, so that the rabbit-hunting greenswards of Clifton and Avondale might be nightly showered by innumerable lawn sprinklers, and given over to the verdure of an eternal spring.

After reflecting upon the intelligence of the Board of Public Affairs, he proceeds to administer a heavy rap over the knuckles of some of the medical savants of the city, who insisted that the recent epidemic of typhoid fever in Cincinnati was caused by bacilli and infectious germs which they had discovered with the microscope in the water of the Ohio River, from which the city obtained its potable waters. We quote:

"When the autumn leaves began to fall and typhoid fever to prevail, then it was that the germ-haunted and

bacilli-infested Ohio was accused of causing pestilence, from sewage from Walnut Hills and the Little Miami River, when the truth is there was not a single stream of water flowing into the Ohio between the Water-works and the mouth of the Miami, and the latter water-course was full of black bass, a fish that is never found in a contaminated stream. Duck Creek and every water-course in Columbia, Pendleton, Undercliff and Linwood had been as dry as powder-horns for several months, and in all the neighborhoods of the valley on our east the cattle were driven to the Miami for their water supply. The outcry at this time, that the typhoid fever prevalent in Cincinnati was due to bad river water, was utterly false and had no foundation in fact, as any one personally familiar with the subject would be forced to admit if placed under oath. It was during this period that the Cincinnati school child trotted to its studies with a mineral bottle of boiled water suspended from its neck, something in the manner of the celebrated chromo of the St. Bernard dog with a beer keg tied under its canine epiglottis; but, alas! the drinking of boiled water did not save some of the innocents."

Now, if other large cities excel Cincinnati in the number of medical men who are distinguished as medical writers, and for great medical lore, we doubt if any can produce a medical man of the great versatility of talent as our Dr. T. C. Minor. He can at a moment's warning write a piece of poetry, try a policeman for misconduct, plan a novel, criticise a board, expose the fallacies of the results of a microscopic examination, exhibit the errors of a congressional bill, etc. Is there another city in the United States that has a physician who can do all these things?

Micro-Organism—Sepsis.—The microscope seems to have completely upset all the old theories in regard to the causes of disease. We used to hear about the *humoral pathology* and other kinds of pathology; but for a number of years the theories connected with them seem to be relegated to the lumber-room of exploded notions. Pathologists nowadays spend the day and sit up at nights intently watching the movements of bacteria, bacilli, micrococci, etc., through their microscopes. Awhile ago it was said by some that diseases were the result of fermentative influences; but it is shown now that that being the fact, it is only another method of asserting that they were caused by

micro-organisms; for it has been proven by the microscope that the presence of bacteria is necessary for fermentation to exist.

The subjects of most interest at this time in the profession are the causes of pulmonary affections, especially phthisis pulmonalis and the treatment of them—the treatment of them which will afford prospects of a cure. Though it is regarded that great advances have been made in medicine, yet it has to be confessed that the physicians of today can no more successfully treat phthisis pulmonalis or cancer than could Hippocrates. Hundreds of valuable remedies have been added to the materia medica in modern times, and the laws of health seem to be far better understood than was formerly the case; yet the ravages of consumption and cancer are not at all stayed. In fact, on the contrary, they seem to be constantly increasing.

Koch, who discovered the tubercular bacillus, states that it is peculiar to the lungs in certain conditions of them—tubercular disease. He claims that it sets up *de novo* a peculiar inflammation, that the character of the products of such inflammation differs from the products of other inflammations, and the sepsis or poison is contained in the bacillus, which never occurs spontaneously, but is always found in connection with this diseased condition.

In a recent number of the *Journal* is an interesting article, by Dr. S. J. Radcliffe, on "Inhalations in Pulmonary Diseases," in which he treats at considerable length the causes of pulmonary tuberculosis. He says: "Some practical questions arise here for consideration, the most important of which are, first, can we destroy these micro-organisms in the lungs with safety to the patient? and, secondly, can we reach them by methods in our possession after we have satisfied ourselves they can be destroyed?"

Experiments have proven that we may destroy the parent, but fail to kill the offspring. Tyndall has shown that there are stages in the life of bacteria during which they resist almost any degree of moist heat. Sanderson estimates the temperature that will destroy common septic bacteria at about 230° F. Parkes says "that they can stand a short boiling, that they can be floated in air-bubbles through vitriol, that they can be washed with carbolic acid solution of any strength short of 5 per cent., without being killed or losing their power of multiplication." "Is it likely," he continues to say, "that we are capable of destroying or-

ganisms which are so retentive of their vitality? I think it is quite obvious that all evidence shows that it is impossible either to keep germs out of the body or by antiseptics to kill them."

Dr. Radcliffe quotes from an article in the *Lancet* (May 5, 1883), by Dr. Nathan Hill Hassall, who experimented with inhalations of phenol, or carbolic acid, creosote, thymol and iodine. Dr. Hassall expressed it as his opinion that but little evidence has yet been adduced to prove that any of the substances employed do really make their way into the lungs in any appreciable amount, and so reach the seat of disease.

Dr. Radcliffe closes his very interesting paper with the following conclusions:

"The conclusions at which we may arrive in analyzing these remarks are: 1. That we have not yet discovered the ways or means to destroy micro-organisms in the lungs in phthisical diseases. 2. That our studies probably have not been in accordance with the teachings of physical or vital laws in order to fulfill this indication. 3. That our failures in inhalation therapeutics may be due to misapprehension of the relationship of micro-organisms to disease. 4. That it would be strange if in the end we should discover that micro-organisms are not carriers of disease, but only the result of putrefaction, whether we find them in the dead carcass on the plains or in the lungs of the refined in luxurious habitations. 5. That the object of our treatment should be rather to preserve structures in health than seek to destroy organisms which are not amenable to treatment."

Tracheotomy Respirator.—Dr. Thos. F. Rumbold, of St. Louis, reports in the Journal a case of tracheotomy, and describes an instrument he devised:

"On February 21, 1870, with the assistance of Dr. Wm. Niehaus, of this city, I performed tracheotomy on Mr. Wm. D., æt. forty-three years. Immediately after he was placed in bed I had a large sponge, that was squeezed out of quite warm water, laid over the tracheal tube. This warmed and moistened the air as it entered the lungs, thus preventing the necessity of having the air in the room unduly heated and moistened, which is usually found beneficial in tracheotomy cases. While he was in the house he had the hot, moist sponge on his neck all the time. In

eight days he was strong enough to drive to his place of business, but was prevented by his inability to keep the sponge warm. As soon as he went outdoors and the sponge became cold, the cold air produced an excessive cough and some pain in his lungs.

"For the purpose of allowing him to have warm, moist air all the time, and also to allow him to blow his nose—which gave him a great deal of trouble and much discomfort because of the presence of profuse nasal secretion—I connected the tracheal tube with a rubber tube, which he placed in his mouth. In this way the air from his lungs passed through his mouth, up behind the soft palate and out his nose. This enabled him to blow his nose as perfectly as he had ever done. During inspiration the air passed through his nostrils, mouth and rubber tube into his lungs through the tracheal tube, thus giving it nearly the normal degree of warmth and moisture.

"It was found, after a short trial, that the muco-purulent secretion from the lungs, and the condensation of the moist air from the mouth and nose, as well as some saliva from the mouth, accumulated in the rubber tube, which, when they passed it into the trachea, caused intense spasmodic coughing. For a few days he partially prevented this by clearing the rubber tube after taking it out of his mouth, by coughing through it rather forcibly. As it was quite difficult to cleanse the rubber tube of the muco-purulent secretion in this way, I had a glass receptacle attached to the tracheal tube and the tube going to his mouth, so that the secretions were prevented from entering the tracheal tube."

THE THIRTY-EIGHTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION begins in Cincinnati May 8, and will adjourn on the 11th. As we have before mentioned, the President will be Dr. A. Y. P. Garnett, of Washington, D. C. The "Address in Medicine" will be delivered by Dr. Roberts Bartholow, of Philadelphia; the "Address in Surgery" by Dr. E. M. Moore, of Rochester, and the "Address in State Medicine" by Dr. H. P. Walcott, of Cambridge, Mass.

The general sessions will be held in Music Hall, and the sectional meetings in adjoining rooms in the same building.

HOTEL CHARGES IN CINCINNATI.—For the benefit of delgates to the *American Medical Association*, and other medical gentlemen who expect to be in attendance, we give the prices which a number of hotels and boarding-houses agree to charge those attending:

Grand Hotel, Fourth Street and Central Avenue, per day, $3 to $5.

Burnet House, Vine and Third Streets, $3 to $5 per day.

Gibson House, Walnut Street, between Fourth and Fifth Streets, $3 to $5 per day.

St. Nicholas, Fourth and Race Streets, rooms $1.50 to $4 per day, European plan.

Palace Hotel, Vine and Sixth Streets, $2 to $2.50 per day.

Hotel Emery, Vine Street, between Fourth and Fifth Streets, rooms $1 to $2.50 per day, European Plan.

St. James Hotel, Fourth Street, near Main, $2 to $2.50 per day.

Dennison House, Main and Fifth Streets, $2 to $2.50.

Walnut Street House, Walnut Street, between Sixth and Seventh Streets, $2 to $2.50 per day.

St. Clair, Mound and Sixth Streets, $3.50 to $5 per day.

Crawford House, Walnut and Sixth Streets, $1.50 to $2 per day.

Geneva Hotel, Race and Sixth Streets, $1.25 to $1.50 per day.

Galt House, Main and Sixth Streets, $1.50 per day.

There are, as in all large cities, several thousand boarding-houses, at which boarding can be obtained at from the very lowest rates (low enough to suit the most economical) to those equaling the first-class hotels.

Mrs. Morris is at Seventh and Plum Streets, rates from $2 to $2.50 for board and room per day.

Mrs. Rathburn, 119 Broadway, $2 to $2.50 per day.

Mrs. Knight, 105 Broadway, $1.50 to $2.50 per day.

Mrs. Saffern, 88 East Fourth Street, $1.50 to $2.50 per day.

Mrs. Fennell, 102 West Seventh Street, $1.50 per day.

Physicians accompanied by their wives, if disposed to economize, can find many furnished rooms for rent, in respectable families, at from fifty cents to $1 per day, obtaining their meals at a neighboring restaurant.

OBJECTS OF INTEREST IN CINCINNATI.—Admission to the following places of interest, by simply showing membership cards, can be had by members and their wives.

The Art Museum in Eden Park. Reached by Highland House cars at Fifth and Walnut Streets. Its attractions vie with the best collections even of the old world, and hours can be profitably spent in its inspection.

The Museum of Natural History on Broadway, near Third, is also well worthy of a visit.

The Zoological Gardens, located in the north part of the city, and covering over sixty acres of beautiful park, is reached by the Cincinnati Northern Railroad, depot at Court and Broadway, or by the Vine Street line of cable-cars. These Gardens, we are proud to say, have the finest collection of birds and animals in this country. The pair of giraffes owned by the Garden, and the polar and grizzly bears, are said to be the finest specimens of these animals in captivity. The collection of birds of plumage and carnivorous animals is very large and fine. A day can be profitably spent in the Garden by delegates and their wives.

The Rookwood Pottery, located at 207 Eastern Avenue, is reached by the Elm Street line of street-cars. The Rookwood was established through the liberal beneficence of Mrs. Storer, to afford facilities for the manufacture of the finest grades of pottery ware, and especially to cultivate a growing taste for the beautiful in art as illustrated in home adornment. As this industry has been entirely conducted by ladies, it will be of special interest to the wives of delegates.

The Cuvier Club-rooms, on Longworth near Race, contains a museum of prepared specimens of fish, birds and all kinds of game, that is well worth visiting.

The gymnasium, at corner of Longworth and Vine Streets, is a complete institution.

The Public Library and Reading-room, on Vine between Sixth and Seventh, and the Mercantile Library, on Walnut Street between Fourth and Fifth, are worthy of a visit, and will furnish delegates an opportunity to see the newspapers of their own locality.

The Highland House, with its incline plane railroad, affords one of the finest views of the beautiful river and its spans of bridges that it is possible to obtain.

The Cincinnati Hospital, on Twelfth and Central Avenue.

St. Mary's Hospital, on Betts and Linn.

The Good Samaritan Hospital, on Lock Street.
The United States Marine Hospital, on East Third Street.
The Children's Hospital, on Mount Auburn.
Longview Insane Asylum, at Carthage, on C. H., & D. R. R.
The Ohio River Bridges and the Centennial Exposition Buildings.

SURGICAL INSTRUMENTS.—A few years ago we were informed that quinine could not be produced at a less cost than $2.30 cents an ounce. If the duty were taken off, quinine of an inferior grade would be imported, and an immense industry crushed. The duty was taken off, and to-day quinine is selling at from thirty to forty cents an ounce, at wholesale. We have not seen any destructive influence to American chemical manufactures, and the people have got the benefit. Now, the Georgia State Medical Society comes forward and says that we, as physicians, pay an enormous price for our surgical instruments. The Society passed a series of resolutions when in session, asking Congress to take the duty off of "all medical and surgical instruments and appliances, including those used in the diagnosis as well as treatment of disease, so that they may be furnished to persons needing them at the lowest possible price." In a circular issued on authority of the Society, by Dr. J. C. LeHardy, Corresponding Secretary of that body, calling the attention of the medical press of the country to the matter, the doctor advances the following proposition:

1st. "Physicians are at the mercy of instrument-makers in regard to price, make and quality of finish, because of the lack of sufficient competition.

2d. "The price of instruments made in this country is out of proportion to that paid for similar instruments on the Continent of Europe.

3d. "Surgical instruments and appliances are so costly that but few doctors entering the profession can provide themselves with an outfit adequate to carry on a general practice. At present prices it is impossible for a country physician's income to warrant his investing in costly instruments, and, as a result, many simple cases, such as retention of urine, foreign bodies in nose or throat, deep-seated abscesses, etc., all of which could be relieved at once with the proper instruments, must either die from the immediate

cause, or from the effect of time lost in seeking skillful manipulation, or else they are frequently crippled and disfigured, because the most intelligent help, though patiently given, is itself crippled for want of proper instruments.

4th. "The cheaper grades of instruments are either antiquated, or so poorly made that they may prove a cause of failure in operations, sapping, as it were, the natural inclination to surgery in its inception.

5th. "European instruments are from 25 to 75 per cent. cheaper than ours, and their introduction into the market will enable the mass of doctors to buy those of prime necessity, will bring down the price of home-made appliances, and oblige the makers to use good material and put a better finish to their work.

6th. "The removal of import duties on surgical and other instruments used by the profession, and on medicines in general, will produce the same results as we all know it did on the article of quinine."

We understand that the instrument-makers are advancing the same argument that the quinine manufacturers did, and we imagine that if the import duty is taken off, the result will be about the same.—*New England Medical Monthly.*

Fifty-eighth Annual Report of the Public Schools of Cincinnati.—We are indebted to Mr. F. T. Foster for a copy of this report, which forms an octavo volume of 308 pages. It contains a great deal of highly interesting matter; but we have space to notice but a few facts.

The number of children enrolled in the districts, between the ages of six and twenty-one years, according to the last census, taken in 1886, is of white children, 85,525; of colored children, 2,368; total, 87,893. But all these do not by any means attend school. Those that attend the public schools are: Males, 17,815; females, 16,525. Those that attend private schools are: Males, 758; females, 874. Those that attend church schools are: Males, 6,977; females, 7,547. According to this statement there are 50,498 children, male and female, between the ages of six and twenty-one years, attending either the public, private or religious schools of Cincinnati. These, we should mention, are white children. Of colored children, male and female, attending school, there are 2,056. The number, white and colored, not attending schools of any kind is astonishing; namely,

18,071 males, and 17,941 females; total, 36,016. The church or religious schools, we presume, are the Roman Catholic schools.

The Public Library, which is managed by a Board of Managers appointed by the School Board, contains at present in the Public Library proper 138,819 books; pamphlets, 13,323; Theological Library, 5,307 books; pamphlets, 1,384; Mussey Library, 5,945 books; pamphlets, 3,666.

Decease of Dr. Agnew.—Dr. Cornelius Rea Agnew, the distinguished eye and ear specialist, died at his residence, 266 Madison Avenue, New York, April 18th. He was taken ill on Monday, April 9th, with peritonitis, and failed rapidly until the following Friday, when his physicians practically abandoned hope. But he rallied during the next twenty-four hours, and until Monday, the 16th, the favorable symptoms seemed to continue; but as the day wore on, all hopes were abandoned, owing to the renewed activity of the disease, which gradually sapped his strength until it gave way.

When ex-Senator Conkling was taken ill, on April 5th, Dr. Agnew was called to treat him. As the case was so serious, Dr. Barker and Dr. Sands expected him to take part in the operation which lengthened Mr. Conkling's life several days; but his own illness prevented his being present. Last Thursday his attending physicians decided that an operation was necessary, if Dr. Agnew's life was to be saved, and laparotomy was performed, Dr. Agnew himself administering the ether. The incision was about four inches long. Pus was discovered and removed; but the operation failed to bring the expected relief.

Grand Centennial Exposition.—The buildings in which the Centennial Exposition is to be held are now completed, and have been handed over to the Commissioners. The event was duly celebrated by a grand parade, speeches, music, etc. Many thousands of people thronged the buildings on the day of their dedication.

The Exposition, as we have stated, begins on July 4th, and will continue one hundred days. It will not be surpassed by anything of the kind ever held in this country.

There will be exhibitions in every department of industry, science and art. No doubt many thousands of people will visit Cincinnati during the great Centennial Exposition. Physicians will find in the exhibitions very much to interest them.

The New York County Medical Society caused the arrest of an Italian shoemaker for practicing medicine without a diploma. At his trial the cobbler entered the plea that he had used no medicines, but simply used charms which had been taught him in Italy, to cure people of witchcraft. His deluded countrymen had to pay roundly for his services whenever they went to him to have the spells of witchcraft lifted from them. He was fined fifty dollars, and he said with a sigh that he would hereafter "stick to his last."

A Newly-Coined Word.—The *British Medical Journal* announces the addition of a new word to the English vocabulary, viz.: "to sanitate." Our namesake, of Philadelphia, says that the innovation will be welcome to all who have to write upon questions of hygiene: "the evolution of modern civilization makes necessary such additions to our vocabulary."

Dr. Roberts Bartholow, of Philadelphia, we understand, has been elected an Honorary Member of the Royal Medical Society of Edinburgh, Scotland.

Dr. Oliver Wendell Holmes, the distinguished American poet, has presented his valuable medical library to the Boston Medical Library Association.

Beautiful Chemical Preparation.—A snow white mass of caffein, the active principle of coffee (200 pounds and of great value), is now on exhibition in the window of William R. Warner & Co., 1228 Market Street. This beautiful crystallization represents ten tons of coffee, and is used as an ingredient in the preparation of bromo-soda, prescribed for the cure of headaches, migraene, nervousness, sea-sickness, etc.—*Philadelphia Inquirer.*

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Original Contributions.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

BURNS AND CONGELATIONS.

The author, Dr. Tuhoff, has employed this method of treatment with success in sixty cases of burns and of congelations. It consists in the application of compresses, wet with a solution of permanganate of potash. The strength of the solution is 5–15 centigrammes (1–3 grains) of permanganate of potash to 30 grammes (℥i.) of water. The compresses of linen or muslin are frequently renewed.

The treatment is only efficacious in congelations of the first and second degree and in burns of the first degree.

In all cases it rapidly relieves the pain and removes the inflammation; when the blisters are intact suppuration is always prevented.

The author cites the case of a person who, in taking a vapor bath, received a burn of the first degree on the back, chest and belly; the solution of permanganate suppressed the pain in one hour; the epidermis exfoliated and a cure was obtained at the end of a week.—*Union Medicale de Canada.*

INGROWING TOE-NAIL.

Doctor Patin writes to the *Gazette des Hopetane:*

Since the last two years I have employed in the treatment of ingrowing toe-nail a means which, although not new in the numerous surgical procedures advised for this affection, seems to me capable of rendering very efficient service.

After a rather prolonged foot-bath, and after a gentle but as thorough a cleansing and drying of the nail as possible, I introduce, by the aid of a brush, into the interstices between the nail and the fungosities a solution of gutta percha in chloroform (gutta percha 10 parts, chloroform 80 parts), which is known under the name of traumaticine, and which has been used with success by Besnier in the treatment of psoriasis. I have this application repeated several times the first day and less frequently the following days.

A great comfort brought about by the action of the chloroform follows this application. If the patient will now content himself with these applications solely, and refrain from all inopportune excoriation of the flesh, and scraping and tearing of the nail, and if he will have the patience to wait till the nail has again grown forth, and then cut it transversely, and confine himself to slightly dulling the corners, and if finally he will avoid walking for a time as much as possible, and only wear sufficiently large shoes, a prompt and lasting cure will not fail to be established.

It is easy to comprehend the effect of this treatment. The traumaticine, having the fluidity of chloroform, penetrates into the finest folds of the flesh, and, after evaporation of the dissolvent, the gutta percha, which constitutes the residue, forms a coating, which separates the nail from the fungosities, and which is increased in thickness and elasticity by renewed applications. It also protects the fungosities from frictions produced externally.

It is sometimes necessary to complete the protection to cover the affected toe with a cap of diachylon, which is replaced after each application of the traumaticine.

I have had occasion to treat in this way numerous ingrowing toe-nails, especially in pregnant women, in whom all surgical interference is already *a priori* out of question, and I can affirm that in all instances where the patients conformed to the above-mentioned directions, a cure was very soon established.—*Abeille Medicale, L' Union Medicale de Canada.*

LOCOMOTOR ATAXIA—APPLICATIONS OF THE HOT IRON.

According to Brown-Sequard, says Dr. Cozenave de la Roche, in the *Journal de Medicine de Paris*, it is not along the spinal column that the heated iron is to be applied, but on the lower limbs, proceeding in a circular manner. "I believe I do not exaggerate," says Dr. Cozenave, "when I say that from the first cauterization the shooting and lancinating

pains in the limbs, as also the formication, disappeared completely. There is also a marked improvement noted on the part of the head; the pains in the nucha have ceased. At the present writing the improvement is still maintained, as the latest reports from the patient indicate. Will this improvement continue definitely? Will the inhibition of the nervous sclerosis be but temporary? I do not know. But, however, it may come, this therapeutic result realized by means of the procedure of Brown-Sequard marks a progress, which is the more appreciable as medicine has, up to the present, been almost impuissant against this redoubtable affection. The amelioration obtained in the treatment of certain sciaticas of grave and obstinate form by cauterizations practiced on the great toe, seem to enter rightly into the same category of clinical facts. It is explained by the reflex excitability impressed upon the spinal cord.—*Scalpel Union Medicale de Canada.*

GASTRO-DUODENAL ULCER.

The following is the plan of treatment devised by Dr. Debove for the treatment of gastric ulcer. The patient makes three meals a day, each of which consists of twenty-five grammes of powdered meat, thinned up in soup or in aromatic water. To this is added the following powder:

℞. Magnes. calcin., . . 1 grm.
Creta præpar., . . 2 grms.
Calcis. saccharate, . . 1 gr.
M.

Immediately before eating the patient takes two grammes of bicarbonate of soda; a quarter of an hour after eating, four grammes of the bicarbonate of soda. The patient is advised to take the milk in small quantities. At the outset of this treatment, Debove washes out the stomach and employs the tube in the administration of the first meals, prepared as above. With Leube, Debove does not believe that there is any danger in washing out the stomach in simple gastric ulcer; however, should the water on its return be slightly tinted red, the operation must be immediately suspended.

For duodenal ulcers, recently studied by Dr. Bucquoy, the milk treatment is recommended as the best. The patient takes every two hours a glass of unboiled milk, either cold or slightly warmed, and diluted with Vichy water.

When hemorrhages occur, the milk should be taken iced and with an addition of lime-water; if the hemorrhages are severe, we must resort to the application of ice to the belly, to the hypodermic injection of ergot or ergotine, to the water of Rabel, to the extract of rhatomy, and more especially to the persulphate of iron. In the period when the ulcer tends to cicatrize, moderate revulsion (counter-irritation) on the epigastrium or in the right hypochondrium is of benefit.

The point of difference between the plan of treatment for duodenal ulcer, and that for the malady of Cruveilhier (gastric ulcer), is in the regimen of the period of convalescence. Whilst in case of ulceration of the gastric mucous membrane it is absolutely necessary to maintain a severe regimen, and continue the use of the milk for a very long time, the patient affected with duodenal ulcer may, thanks to the good working of the stomach, return at an early day to a more varied diet, and thus satisfy the demands for reparation, which the severe and sudden hemorrhages leave behind them.—*UnionMed. de Canada, Revue de Therap.*

REFLEX NEUROSES DUE TO CONSTIPATION.

Besides the disturbances of the circulation, and more particularly the palpitations, irregularities of the pulse, the vertigo, which must be attributed to excitation of the cardiac branches of the grand sympathetic, Kirsch believes that the obstinate hemicranias are frequently due to no other cause. Certain species of sciatic neuralgias, of limbo-abdominal pains, of ovarian crises, and even neuralgias of the fifth pair, may be due to constipation.

Kirsch collected forty-eight cases in which the cessation of the constipation was followed by a cure of various chronic neuralgias.—*Ibid, Jour. de Sc. M. Lille.*

TREATMENT OF PERI-ANAL ABSCESS.

What should be the conduct of the surgeon, when called to attend an abscess of the margin of the anus? Should he follow the teachings of Foubert and make a simple ncision, or should he obey the precepts of Foget and split the rectum through the whole length of the abscess? Prof. Reclus in a memoir, and Trelat in a clinic, have pronounced categorically in favor of the method of Foget.

Dr. Bazy reports two observations before the Société de Chirurgie of two patients who were entirely and quickly

cured by means of the simple incision of Foubert, and in view of these two cases he opposes the conclusions of Reclus and Trelat. The former, in order to explain this contradiction, seeks to establish several categories of abscesses and fistulæ in ano. Prof. Trelat distinguishes but two anatomical varieties: The abscesses of the ischio-rectal fossa, extra-sphincterian abscesses; the sub-tegumentary abscesses or intra-sphincterian. Each of these two varieties comprises two etiological forms: The abscess of inflammatory origin, clearly phegmonous; the collections due to the softening of some tuberculous nuclei.

The abscesses of the ischio-rectal fossa, whether phlegmonous or tuberculous, should always be treated by the method of Foget. As to sub-tegumentary abscesses, if they are of tuberculous origin, they must be treated in the same way; the only question is as to the last category, sub-tegumentary abscess of inflammatory origin. But even in this last category, and it is probably to this that the observations of Bazy belong, though we may hope for cicatrization from a simple incision, still, there are certain circumstances, the existence of a diverticulum, feebleness of the patient, penetration of septic matter, that may prevent perfect healing and give rise to a fistula. It is therefore better, under all circumstances, to prevent such fistula by resorting to the method of Foget.—*Ibid*, *Révue de Therap.*

ULCER OF THE CEVIX UTERI.

℞. Glycerole of starch, . . 60 parts.
Iodoform, . . . 6 parts.
Essence of peppermint, . q.s.

M.—Apply on a tampon every twenty-four hours.
—*Morfan, Gazette Med. de Med.*

Malarial Hæmaturia.

BY R. H. DAY, M.D., BATON ROUGE, LA.

Read before the Louisiana State Medical Society.

THE literature of *Hæmorrhagic Malarial Fever* is very meager and dates back to only a few years in the past. Our old authors do not mention it, if I recollect rightly, and even our recent standard authors are nearly, if not quite, as silent;

or, if they speak of it at all, it is so indirectly and cursorily as to convey but little information on the subject. Why this is so, it is difficult to give a good reason, unless, perhaps, it is that our standard medical writers, ancient and modern, were city practitioners of medicine, and acquired their experience and information from those fields of labor only, where they had but few, if any, opportunities afforded for its personal observation; and hence, did not, and could not write of a disease they had not seen and knew nothing about. Nevertheless, whatever may have hindered, it is a fact, that nothing is known of this disease, except what has been written about it of late years; for it is only in recent years that medical men have begun to observe it closely, to write up its symptoms, to discuss its history and nature and its correct treatment. And especially is its investigation upon a scientific basis of recent date.

Those who first observed and wrote of this disease were men whose labors were confined to rural and insalubrious localities, where facilities for scientific investigations were entirely wanting, and were obliged to depend solely upon clinical observation and experience for the information or knowledge they collected; and hence, could merely describe its symptoms and the remedies used in its treatment; while those who have more recently observed, and thought more deeply about it, have so differed as to its essential nature and plans of treatment, that the profession up to this day are divided in opinion upon these points.

I may not be more fortunate in my efforts to throw light upon this subject than others have been, but I may hope, from long experience and attentive observation, if I can express my thoughts clearly, to help to direct medical thought to correct conclusions, and dispel much of the ambiguity that now attaches to its literature.

Hæmorrhagic malarial fever, or malarial hæmaturia, known by the laity as "*swamp fever*," and so called by some of the faculty, to designate its prevalence in swampy localities, is a disease, according to my observation, more or less prevalent in all river deltas, low lying, swampy districts and contiguous neighborhoods in every part of the United States, between 42° north latitude and the Gulf of Mexico, during the late summer and fall months.

Notwithstanding it is thought by many to be a disease of recent development, having, it is said, first been observed in Georgia, in 1846 (Dr. I. J. Newton, Jr., in a paper read

before the Louisiana State Medical Society in New Orleans, in April, 1885), I here emphatically state, repeating what I said on the occasion referred to, that in 1837, up to 1843, I encountered this disease every year in the bottom lands of the Wabash and White Rivers in the States of Illinois and Indiana, and from 1843 to 1846 in the White River bottoms in the State of Arkansas, and that the oldest citizens of those places at that time, recognized this disease and spoke of it as their ancient and common enemy in those highly malarious localities.

The idea, then, that it is a disease of recent origin would seem to be erroneous in the light of this experience, and clearly irrational, if we are correct in supposing that the same causes and conditions which now engender it have existed in all past time, and must have exercised the same pathogenic efficiency then as now. That it is a miasmatic disease, caused by malaria, whatever that undefined and as yet undiscovered fever poison may be, there can hardly be a reasonable doubt. Its occurrence in the same localities, at the same season of the year; its striking resemblance and strongly-marked physiognomy to the malarious, bilious diseases endemic in those districts, and its general amenability to the same therapeutic agents, reveal its kinship, stamp it as allied to and of common origin and nature with them. We then unhesitatingly class it as an hepatic-renal affection of malarial origin, depending upon malarial toxæmia for its existence and striking morbid manifestations.

Like all other diseases of which we have any knowledge, it is marked in its attacks and progress by various shades of intensity; some cases being comparatively mild and even intermittent in form, while others are deeply virulent, pernicious and rapidly fatal in character. In the milder cases, the systemic disturbances are less threatening and the local symptoms less aggravated; the blood that is passed in the urine or from the bowels is not decomposed and disintegrated as in the violent and acute cases. In the former, the red blood-corpuscles are readily detected in the urine by the microscope; in the latter, the urine contains only the debris of decomposed and disintegrated red blood-globules, tube casts, etc. The former is fairly illustrated in a case reported by the late Dr. S. M. Bemiss, as "Malarial Hæmaturia" in the "System of Medicine," by Pepper, in his article on "Malarial Fever." He says, vol. 1st, page 611: "C. E., aged twenty-six years, was admitted to ward 19, Charity

Hospital, November 18, 1872. Has been in America more than a year, and for several months had been working in an intensely malarial district, preparing the bed of a railroad. Has had malarial diseases for several months, and suffered a severe chill the day before admission. A few hours after admission, temperature 103°, pulse 120, respirations 29; effusions in both thoracic and abdominal cavities and very marked in abdominal cavity; lower lobe of the right lung œdematous, legs anasarcus, pitting greatly on pressure, with several ulcers of long standing; urine loaded with albumen, and showing under the microscope *abundant blood-corpuscles* (italics mine); considerable jaundice present, which the patient states to have occurred suddenly. Ordered five grains each of calomel and bi-carbonate sodium, to be followed with ten grains quinine every two hours. November 22d—Patient has taken and retained one hundred and eight grains of quinine. Secretion of urine abundant; no blood present and only a trace of albumen. Ordered twenty drops of tinct. chloride of iron three times daily. Discharged, cured, December 12th."

This case, reported by Dr. Bemiss as malarial hæmaturia, although complicated with serous effusion in both thoracic and abdominal cavities, was obviously only a specimen of the milder form of the disease, demonstrated by the entire absence of nausea, the presence of red blood-corpuscles in the urine, and the ready yielding to a dose of calomel and the liberal use of quinine.

Dr. George Harley, in his great book on the "Diseases of the Liver" (and I add, the most practical and scientific work on the subject I have ever read), gives the history and symptoms of two cases of this disease, under the title of "Paroxysmal Hepatic Hæmaturia," less complicated than the one related by Dr. Bemiss, but possessing two remarkable peculiarities—that of a decided intermittence, with the urine normal or nearly so during the apyrexia, while during the paroxysm the urine was loaded with blood, decomposed and disintegrated, with scarcely a single entire red blood-corpuscle to be seen under the microscope. Dr. Harley says: "The most remarkable features of this affection consist in the strange fact that, although the abnormal urine passed by the patient during the attacks contains the whole of the ingredients of the red blood-corpuscles, scarcely a single entire blood-cell is to be detected in it by the micro-

scope, their debris being at the same time visible in every direction."

That these cases related by Dr. Harley, were also of the milder type, is very clearly shown by the comparatively mild constitutional symptoms and the readiness with which they yielded to calomel and quinine, the same as in the case of Dr. Bemiss. In the graver forms of this terrible disease, the symptoms are greatly aggravated, much more violent and of the gravest character. From the initial chill, there is distressing nausea and vomiting, small, frequent and feeble pulse, great prostration and the emission of dark, bloody-looking urine, presenting to the naked eye a broken down condition and decomposed aspect, loaded with small black granular bodies and tube-casts, and the debris of decomposed and disintegrated red blood-globules (with no entire blood-cell visible under the microscope) and pinched, sunken features, all indicative of profound constitutional contamination. I am sorry that I have not Dr. Joseph Jones' description at hand, but it gives me pleasure to be able to give what Dr. Jones says, through Dr. Harley, who writes: "Dr. Jones, of Louisiana, has called attention to the fact, that in his district there is a very marked acute form of this hepato-renal malarial affection, which he says is characterized by well-marked jaundice, as well as hæmaturia. In some cases immense quantities of green, biliary fluid, or liquid tinged with bile are vomited, and the patients die in a state of collapse, with blue, mottled purplish extremities, and sunken pinched features. As a general rule, suppression of the function of the kidneys is a fatal sign, and, as in yellow fever, is sometimes attended with convulsions, coma and delirium. And while some of the symptoms, as the nausea, incessant vomiting (in extreme cases black vomit), deep jaundice and the impeded capillary circulation, resemble those of yellow fever, yet there are marked differences between this disease and yellow fever; the pathological changes observed after death are characteristics of paroxysmal malarial fever, and not yellow fever." His graphic and truthful description of this acute and violent type of malarial hæmaturia is significant of its typical character, clearly distinguishing it from the milder forms spoken of, and accords with the experience of all careful medical observers who have become familiar with it by personal observation.

It would be tedious to particularize cases, and would swell this paper to undue dimensions to do so, but I would refer

my readers to an article on this disease by Dr. McHatton, of Georgia, published in the *Atlanta Medical and Surgical Journal*, October number, 1884, and to the valuable collection of cases by Dr. Cochrane, of Mobile, Ala., and reported in the *Journal of the American Medical Association*, verified by the analyses of the urines by Dr. Geo. Sternberg, of the United States Army, and Prof. Tyson, of Philadelphia.

It will be observed by reference to these papers and cases, that the one invariable and uniform symptom marking and distinguishing this type of the disease was the bloody urine, destitute of red blood-corpuscles under the microscope, and presenting a decomposed and disintegrated condition of the red blood-globules.

I deem it of very great clinical and therapeutic importance, that the differential diagnoses between this malignant type and the milder forms of the disease should be clearly understood and recognized by the medical profession, in order to adopt the best and most rational treatment, suited to its varying conditions and manifestations, and to avoid that confusion and ambiguity of statement so conspicuous in many of the contributions to the literature of this subject.

Its etiology. I suppose, as already stated, there can be no doubt of its malarial origin; and yet it is only proper that I should state, that the eminent medical scientist and practitioner, Dr. Harley, records a case that would seem to indicate that the disease may be engendered by other causes than malaria. Dr. Harley in his work on the "Diseases of the Liver," pages 246–248, records in substance the following case: The subject, being by trade a blacksmith, of a stout and robust constitution, had never been out of London, nor subject at any time, as far as could be known, to any miasma. When first seen by Dr. Harley, December 24, 1864, he had a dark, sallow, care-worn complexion, with evidence of hepatic trouble, and was paroxysmally passing bloody urine, corresponding with his chilly or cold sensation. He was treated with calomel and quinine, and speedily made a perfect recovery. Notwithstanding this apparently exceptional case, I believe it is thought by all medical men who are conversant with the disease, to be the direct result of malarial poisoning; and, so far as I am capable of judging, the evidences leading to this opinion are clear and beyond all question, and according to my observation, the type or violence of the disease bears a direct ratio to the intensity of the poison or the duration to its exposure. I have never

seen a case of serious or grave import, but in connection with indubitable proof of chronic and intense malarial toxæmia, not until such destructive changes had been wrought in the blood by this subtle poison, as to render it unfit and incapable of longer continuing the vital functions.

How malaria operates on the human organism to effect this destructive change of the blood is a matter of conjecture; yet some experiments of Dr. Harley seem to be giving to physiological and pathological speculation the character of scientific certainty. After giving with great minuteness the chemical characteristics of the urine in malarial hæmaturia and its several constituents, he says: "I was particularly struck with the resemblance this urine bore, to the urine I have occasionally seen dogs pass after I had injected either bile or bile acids in toxic doses under the skin of their backs. Their urine not only occasionally presented exactly the same color, but contained lots of granular tube-casts, and still further resembled this human urine in being coagulable by heat and nitric acid. All this leads me to the conclusion that the condition of the urine in cases of paroxysmal hepatic albuminuria is in great part due to disorder of the biliary secretion brought about by the direct result of malaria acting upon the liver." Again he says: "As bile acids have a powerful disintegrating effect on the cell-walls of the red blood-corpuscles, it has once or twice crossed my mind, that this peculiar condition of the urine in paroxysmal hepatic hæmaturia may possibly be due to an abnormal quantity of bile acids in the circulation." If, then, the bile acids abnormally present in the blood, do have "a powerful disintegrating effect on the cell-walls of the red blood-corpuscles," as stated by Dr. Harley, we have furnished us a scientific and chemical cause for the decomposition and disintegration of the blood, and the reason why no entire red blood-corpuscles are ever detected in the urine of malignant types of malarial hæmaturia. In the *New Orleans Medical and Surgical Journal*, for August, 1885, under the heading, "A Clinical Study of the Liver, as viewed through the Urine," is quite a well-written article, commenting upon the researches and experiments of Dr. Oliver, an abstract of which is published in that number of the *Journal*. It will there be seen that Dr. Oliver ascribes to the bile acids or their salts in abnormal quantities in the blood a hæmolytic property, corroborating the views advanced by Dr. Harley, and giving force to the statements herein made. And the writer very truly ob-

served, "their (bile acids) enormous increase in malarial hæmaturia, also explains the presence of bloody urine, and suggests the point of attack in the treatment of the disease."

That there is a destruction of the red blood-corpuscles under the action of malarial poison does not seem to be a matter of conjecture, but a pathological fact, demonstrated by rigid microscopical examination by our best and most experienced pathologists and microscopists—among them I may name with some degree of pride Dr. Joseph Jones, of New Orleans, whose skill and competency and indefatigable scientific researches are recognized everywhere among medical scientists, says in his *Medical and Surgical Memoirs*, vol. 1st, p. 485: "The *colored blood-corpuscles* are more uniformly and rapidly destroyed in severe cases of *malarial fever* than in any other disease, with the exception perhaps of pyæmia." But it is to be noted that the destruction of the red blood-corpuscles is the direct result of the action of the bile acids upon the blood; and it is pertinent to inquire whence the presence of the bile acids in abnormal quantities in the blood? They are not normally there, and must have been derived from some potent factor.

It is unfortunate that, up to this day, notwithstanding the claims of Drs. Salisbury, Klebs, Crudelli and others to the discovery, no one has been able to establish the identity, the nature, physical or chemical, or bacteriological character of the poison, so that its properties could be analyzed, and its specific toxicological action upon the human organism scientifically tested and demonstrated; but clinically, for ages upon ages, certain well-defined abnormal changes and diseased conditions in the human organism have been seen uniformly to be produced by a residence in or exposure for any lengthened period to marshy, or what is by general concensus of medical opinion regarded as malarious localities. Among these abnormal changes, besides the family of paludal fevers, dysentery, etc., which are so prevalent in such districts, we have also the disease now under consideration, which appears to be the result of chronic or protracted action of the miasma poison, and a careful clinical observation of the symptoms and abnormal changes in the human organism in their order of sequence, would seem to point to a congestion of the liver as the primary effect of this intangible poison, constituting the initial link in the chain of morbid processes afterward developed. From this hepatic congestion, and the probable presence of the malarial poison

in the circulation, still further paralyzing the nervous and vascular tone of the hepatic functions, its biliary secretion is arrested, more or less completely, and the elements that ought to have been eliminated, are retained in the blood, and among these, the bile acids—which at once begin their work of destruction upon the red blood-corpuscles. As a result of the passive congestion of the chylopotetic viscera, enlargement and induration of the liver and spleen ensue, while from the destructive changes in the hæmo-globin and red blood-cell-walls, we have jaundice of all the tissues and well-marked progressive anæmia. From the non-secretion and elimination of the bile and bile acids, and their consequent retention in the blood, daily and hourly in transit through the kidneys, there develops renal congestion, resulting in grave lesions in those important organs, and finally a break-down, culminating in the discharge, through the kidneys, of the decomposed and disintegrated blood, epithelium tube-casts, etc. This, it appears to me, is a rational and correct explanation of the pathological and anomalous conditions, and their order of sequence, which we witness in the clinical history of these cases, and fairly and logically deduced to arise from chronic malarial poisoning.

It is very important that all of these abnormal processes should be clearly recognized and appreciated, in order to be able to institute a rational and scientific treatment; for it is obvious that the chief obstacle heretofore in the way of a correct treatment, was in the fact of a misconception or a misty apprehension of these lesions.

Treatment. In the milder forms of the disease this is simple, easy and successful, as already illustrated in the cited cases of Doctors Bemiss and Harley, a few doses of calomel, followed with quinine, being all that was necessary. When, however, the type is violent and malignant, we will have ample scope for the exercise of our deepest thought and grandest skill. In these malignant cases the patient will be troubled from the onset with distressing nausea, frequent retching and vomiting of a greenish fluid with mucous flocculi, the pulse will be small, frequent and feeble, the skin shriveled and surface cool or cold, with shrunken and pinched features, and the frequent emission of dark, bloody urine, presenting the appearance of disintegrated and broken-down red blood-cells, loaded with the bile pigments in the form of small, black granules. In all such cases the urine, when carefully examined with the microscope,

will be found almost, if not entirely, without a single red blood-corpuscle. These are the severer types of this disease, most malignant in character, that claim our attention. When called to a case of this type we should promptly apply dry cups to the epigastrium and right hypochondrium, with a view to drive the blood from the congested vessels of the stomach and liver to the cutaneous surface, and follow the cups by a blistering plaster over the same regions to maintain the circulation in the skin and to aid in stimulating the liver to its secretory action. Give hypodermic injections of morphia to quiet nervous irritation and to compose the stomach to rest. Give to adults five grains of calomel with three grains of bi-carb. of soda every three to four hours till the alvine discharges show the presence of bile, and the liver again resumes its work; after three or four doses have been given, if the bowels have not been moved, give enemas of plain warm water, or containing a desertspoonful of camphorated oil, or a small teaspoonful of table salt. If the stomach should still be troubled with nausea or a tendency that way, give an emulsion, each dose consisting of one drop creosote, 1-12 to ⅛ sulph. morphia, 3 grains bi-carb. sod., and a drachm aqua menthæ, and repeat every two to three hours as long as required. Frictions over the back with dry mustard and pulv. capsicum, as also to the arms and legs, should be assiduously applied, supplemented with dry heat to the body. As soon as the calomel has produced a well-marked bilious, fecal discharge, or reaction is manifest, no time should be lost in pushing quinine; but not in doses too large. It is all a mistake and highly mischievous to give very large doses of quinine, except in the congestive pernicious forms of intermittent fever, where it is an absolute necessity to prevent the recurrence of another paroxysm. But in this disease, with this type, five to ten grains every three to five hours, till there is slight manifestation of cinchonism, and then at longer intervals, so as to keep up a moderate impression, for the purpose of antagonizing the malarial poison and giving tone to the nervous centers.

The quinine, if the stomach will not tolerate it, should be given hypodermatically, which is the preferable plan, on account of the danger of again setting up nausea and vomiting. As soon as the function of the liver is measurably or appreciably established and enough quinine has been introduced into the system to make its physiological effects

manifest, commence to give the muriated tincture of iron in full doses, twenty to thirty drops every four hours, with a view of toning up the debilitated blood-vessels, reconstructing and vitalizing the hæmoglobin and the red blood-corpuscles, and thus restoring the normal and vital condition of the blood. If the kidneys should fail to excrete urine, use frequent frictions over the lumbar region with warm whisky, spirits turpentine and tincture digitalis, which will often be found efficient in stimulating the kidneys to activity. Sometimes the administration of spirits turpentine in three to five drop doses every three to five hours, either in an emulsion or upon loaf sugar, may be needed to assist the frictions in hastening the action of the kidneys; indeed, it will always be found useful both in stimulating the kidneys and acting favorably upon the mucous membranes, both of the stomach and bowels and of the urinary passages.

I have now given in detail my convictions of the etiology and essential nature of this disease, together with my plan of treatment and the medicines used, which I would recommend as being fairly successful—certainly as much so, if not more, than under other and diverse plans which I have seen others practice—and, withal, it is so rational, and fulfills so completely every pathological condition and indication of treatment, that even when not successful (for some must of necessity die) the physician's mind is left with the composing reflection that he could have done nothing more to turn away the shafts of death and bring his patient back to health again.

I have concluded my paper without any reference to the dietary. Every physician will know that with such a broken-down state of the blood, and such a debilitated and impoverished condition of the digestive and assimilating organs, the necessity for feeding is great, but that only the most nutritious and most easily-digested and assimilable foods should be allowed, and they given in small portions, but often repeated, increasing the quantity, *pari passu*, with the improving strength.

As soon as the patient will bear moving, a dry, bracing atmosphere and a healthy location should be sought, and the patient advised not to return to his malarious home, for we should never forget the pertinacity of this poison. Says Dr. Harley: "In fact, the poison of the worst forms of malaria seems to saturate the tissues and adhere to the constitution with as much tenacity as the poison of syphilis;

for there is no period of an individual's life, after he has once had a bad attack of malaria, at which he may be said to have completely gotten over it."

Two Cases of Extra-Uterine Pregnancy.

BY THOS. J. WOOLF, M.D., NEW IBERIA, LA.

Read before the Louisiana State Medical Society.

At the last meeting of the Attakapas Medical Association I made an incomplete verbal report of a case of *extra-uterine* pregnancy and promised to have more to say upon the subject.

Since that time another one of these interesting cases has fallen into my hands, and at the suggestion of several medical gentlemen I have concluded to make a short report of the *two* to this Society, with such comments as seem to me appropriate.

In order to better understand this anomalous condition, a thorough knowledge of the female organs of generation and reproduction, especially the internal organs, is necessary, and I have thought a brief review not out of place in connection with my report.

The *bladder* a musculo-membranous pouch, serving as a reservoir for the urine, is situated behind the *pubes*. When empty it does not pass beyond, though in some cases, as in retention of urine, it may reach as high as the umbilicus.

Next to it comes that accommodating little canal, the *urethra*. It is, so to speak, *dug out* in the thickness of the anterior wall of the vagina, its extremity being known as the *meatus urinarius*. This canal is extremely distensible, and permits the introduction of instruments of considerable volume. Numerous foreign bodies have been introduced and extracted through this passage into the bladder. I remember to have seen a lead pencil serving as a nucleus for quite a large calculus extracted by my honored preceptor, our President, Prof. Logan, in 1874, from the bladder of a young lady. There have been met with, for instance, needle cases, fruit stones of various kinds, whistles, a bottle cork, a bodkin, and I have extracted very recently the entire remains of a fœtus through it without serious injury.

The *uterus*, designed to hold the product of conception from its fecundation to the moment of its expulsion, some-

times fails to do so. The organ is placed in the cavity of the pelvis, between the bladder and the rectum, below the intestinal convolutions which separate it from the latter organ. It is maintained in position by the broad ligaments at the sides, by the sacro-uterine folds behind, by the round ligaments in front, resting on the vagina and supported by the floor of the pelvis. The uterus being adherent to the bladder, the situation varies according to the state of emptiness or fullness of that viscus. When the bladder is empty, the upper extremity of the uterus is inclined forward, whilst its lower end looks backward. The cavity of the body communicates at its superior angles with the fallopian tubes. These canals arise from the upper angle of the womb. Contained in the middle fold of the broad ligaments, they extend each to its corresponding ovary. At first straight and narrow, the tubes become sinuous, enlarge and terminate by a free, widened extremity which has received the name of *ostium* or *fimbriated extremity*. This fimbriated extremity is fringed at its edges, and one of these fringes, longer than the others, is fixed to the internal part of the ovary. The use of the fallopian tubes is to apply their mouths to the ovaries during fecundation, in order to establish from this organ to the uterus an uninterrupted canal destined to transmit on the one hand the ovule into the uterus, on the other hand the fertilizing principle into the ovary.

Two in number, the ovaries are to the genital organs of the female what the testicles are to those of the male. Situated in the posterior fold of the broad ligaments, they are fixed to the uterus by a fibro-muscular cord called the ligament of the ovary. Their internal extremity receives the insertion of one of the fringe processes of the mouth of the fallopian tube.

An ovum which, after being impregnated, fails to reach the cavity of the uterus, its fixation and development being continued outside of that organ, constitutes what is called *extra-uterine* pregnancy; and the causes which operate to produce it are such as disturb the true relation between the uterus and its appendages, or in any way induce changes in the form of the oviduct calculated to offer a mechanical barrier to the migration of the ovum. Among these are pelvic or peri-uterine cellulitis, blows over the abdomen at or about the period of fecundation, tumors pressing against the fallopian tubes and uterine displacements.

The first case that came under my observation was during the month of May, 1884. Martha Watkins, colored, married, aged twenty-eight years, primipara, ceased to menstruate in February, 1883. The abdomen commenced to enlarge, the usual symptoms of pregnancy followed, and she naturally expected confinement at the end of the term. But in September, preceding the time of expected confinement, she noticed a "*little show*" for one or two days, and became fearful of a premature delivery. This passed off, however, and she enjoyed very good health until the middle of October, when pains commenced. She supposed they would soon terminate with the expulsion of a babe. In this she was doomed to disappointment, for these pains did not cease during the months of October, November and December. Then it was she began to lose flesh, and on January 29th was attacked suddenly with violent nausea, vomiting everything in the way of nourishment. On February 12th she sought medical aid; but from some unknown cause abandoned a competent surgeon and placed herself in the hands of an old negro quack, formerly of this place—since deceased. She was here more than a month, undergoing, God only knows what, when my father-in-law, Dr. Alfred Duperier, was called in. He at once recognized the true condition, as nature had already sought an opening at the umbilicus. This poor woman had been reduced to a mere skeleton. There was no time to wait, and, without unnecessary delay, *laparotomy* (?) was decided upon (I am not sure that this term is correct, as there was complete adhesion to the abdominal wall). In the presence and with the assistance of my confreres, Drs. Duperier, Blanchet, Hebert and Edwards, I proceeded to operate. After fully satisfying myself that perfect adhesion of the sac to the abdominal wall had taken place, the opening was made sufficiently large to introduce the hand. There was no hæmorrhage of consequence. The fœtus had undergone a sort of stinking cheesy degeneration, and was sufficiently reduced in size to be extracted entire, with the exception of a few tarsal or carpal bones. I preserved the specimen, and donated it to the Attakapas Medical Association.

I need hardly say that the woman died. Death followed in less than twelve hours after operation. The opportunity for a *post-mortem* examination was denied me, though there was no difficulty in tracing the primary seat at or near to the right ovary at the time of operation. Does the history

of this case throw any light upon that *questio vexata*—how is labor brought about? Labor pains were brought about at the usual time, though there was nothing in the body of the womb to excite it to contraction. This is a question of physiological interest.

Case No. 2. Mary Robertson, colored, married, multipara, aged thirty-one years. Noticed this last abnormal pregnancy in March, 1883. Menses ceased for three months, when they reappeared as a scanty sanguineous discharge, unaccompanied by pain, and continued to appear at irregular intervals until May, 1884. She noticed the "lump" in her right side; but had given up all idea that she was pregnant. She, likewise, had treatment from the same old quack until September 15, 1884. I was then called in, and diagnosed pelvic cellulitis, never once suspecting that I had another case of extra-uterine pregnancy to deal with. After a due course of temporizing, I concluded to evacuate per vaginam, what I considered an abscess. This was followed by an enormous flow of purulent stuff and total cessation of pain. There was no more fever, my patient's appetite returned, and I congratulated myself upon the happy termination of such a serious case. Not long after this the husband of the woman brought to my office a little bone (afterward recognized as a rib), and said it was found in one of her napkins. I viewed it with a critic's eye, and supposed it a remnant left behind by her voudou doctor. However, this was not the case, for another long bone, evidently the humerus, was found. This opened my eyes, as it were, and a thorough examination per vaginam and per rectum satisfied me. The opening through the vagina had closed, at least I could not find it. Now, here was presented a case favorable for operation, the general health of the patient having greatly improved. I asked myself the question, shall I interfere or trust to the *vis medicatrix naturæ?* Experience in the former case had demonstrated the dangers of delay as well as the dangers of the operation. While thus undecided what course to pursue, I consulted by letter an ever-willing friend, whose reply determined me to proceed cautiously. My intention was to make an opening through the vagina and remove by piece-meal; but for good reasons this was abandoned. Sudden difficulty in voiding urine directed my attention to the bladder, and, upon introducing the catheter, I felt a piece of bone, and, upon further examination, I found many bones in the blad-

der. Up to this time there has been *no vesical irritation.* Remembering the dilatability of the urethra, I was not long introducing a small speculum. This determined me to utilize that channel, and, I am glad to say, my persistent efforts were crowned with success. Temporary paralysis of the sphincter was the source of some inconvenience for five or six weeks; but this has disappeared, and my patient is as well as ever. The flat bones were easily crushed. The others gave no great trouble. I used my index finger with more ease to myself and patient than the forceps.

I lay no claim to originality in the conduct of either of these cases, and perhaps subject myself unnecessarily to criticism; but the "unvarnished tale is told;" whether well or not, I leave you to decide.

Obstetrical Society of London.

A MEETING was held on April 4th; Dr. John Williams, President, in the chair.

Dr. Cullingworth exhibited a thick-walled cyst behind the uterus, which lay embedded in the anterior wall of the cyst.

A report was read on Mr. Sidney Harvey's "Specimen of Interstitial Gestation," exhibited at the January meeting.

Scarlatina during Pregnancy and in the Puerperal State.— The adjourned debate on Dr. Boxall's series of papers was resumed and concluded.

Dr. Galabin noted the remarkable absence of mortality in Dr. Boxall's cases, but brought forward statistics to show that the general belief in the danger of puerperal scarlatina was not incorrect. The favorable results in Dr. Boxall's series might be explained, either as due to the excellent antiseptic precautions, or to the mild type of the epidemic. Experience proved that puerperal scarlatina was sometimes mild, where no antiseptics were used; on the other hand, there might be much pelvic complication, and Dr. Galabin had twice seen fatal peritonitis appearing during desquamation. He considered that evidence concerning the marked form of scarlatina resembling septicæmia was conflicting. There appeared to be a fascinating simplicity in arguing that scarlatina and septicæmia are two distinct, specific diseases, the one inconvertible into the other. Yet septicæmia was not one disease, but a group, comparable rather to all the zymotic diseases together than to scarlatina or erysipelas

alone. About twenty microbes had been described as the active agent in different forms of septicæmia, which must be defined as including the effects of all germs except the specific agents in named zymotic diseases. Hence, septicæmia did not represent a definite entity, like scarlatina. In the latter disease, again, Cheyne found the common microbes of suppuration in the blood not unfrequently. Dr. Matthews Duncan had shown that, according to the Registrar-General's reports for London, there was no increase of puerperal fever in proportion to that of scarlet fever or erysipelas; this was strong evidence that scarlatinal poison could hardly produce a disease simulating puerperal septicæmia. Dr. Galabin believed that at least the above fact proved that scarlatina was not numerically an important cause of puerperal fever; if it did not account for over five or ten per cent. of all cases, it would not be manifest in statistical charts. There was strong evidence of a bacterial relation of erysipelas to puerperal fever; and Dr. Galabin brought forward evidence which tended to prove that scarlatinal poison might produce a disease simulating puerperal septicæmia.

Dr. Horrocks quoted reports of the Guy's Hospital Lying-in Charity, which showed the rarity of scarlet fever of the ordinary type in the puerperal state; and he asked how many women were confined during the time that Dr. Boxall's cases were collected. Some of these cases were possibly not scarlatinal, or else represented very mild scarlatina. He believed that the incubation was not shortened when infection took place during labor; but, inasmuch as the poison there could generally enter the system at once, the incubation began immediately, and so the fever developed within a few days after the exposure. He discussed at length the subjects of Dr. Boxall's series of papers, noting corroborative evidence and indicating sources of fallacy.

Dr. Cayley thought that there was no sufficient evidence that the poison of scarlatina was capable of directly causing septicæmia. Cases of scarlatina following operations, and of operations on patients suffering from scarlatina, had usually done well at the London Fever Hospital. Very few cases of puerperal scarlatina had been admitted into that institution, and in two alleged cases where there were acute septicæmic symptoms diagnosis was doubtful.

Dr. Champneys testified to the great care with which Dr. Boxall had studied his series of cases, never neglecting to

trace the history of each case after discharge from hospital. Dr. Champneys noted that the paper contained the analysis of a series which occurred during one epidemic. Different conclusions would probably be drawn from the record of the cases seen in consultation, for the very fact of consultations implied picked bad cases—in other words, series should be compared with series. Dr. Champneys then made some observations on the question of scarlatina puerperalis, and criticised the accuracy of collective investigation reports, which represented opinions formed by hundreds of men of different views. Dr. Cayley's valuable evidence was unfavorable to the opinion that the septicæmic variety of scarlet fever existed.

Dr. Jamison agreed with Dr. Boxall's views; he thought that the best diagnostic difference between scarlatina and puerperal septicæmia was to be found in the retina, for retinal hemorrhage was almost a constant occurrence in septicæmia, and all but invariably absent in scarlet fever. Extreme antiseptic precautions were impossible in ordinary practice, and fortunately scarlet fever was neither very readily communicable to puerperal subjects, nor very severe when they took it.

Dr. W. J. Collins was no great believer in the absolute specificity of scarlet fever, and hinted that a process of evolution might affect the *materies morbi* of specific diseases.

Dr. Hayes insisted on the entire distinctness of scarlatina and septicæmia, and, in his experience, puerperal cases were not highly susceptible to scarlet fever.

Dr. West distrusted theories about the evolution of diseases, and maintained the specificity of scarlet fever. He had seen much of puerperal fever, but had never come across a case which could be traced to the contagium of scarlet fever, a disease with which he might claim to be very familiar. The pregnant, parturient and puerperal woman was, undoubtedly, not highly susceptible to the contagium of scarlet fever. Only two cases, which he related, represented Dr. West's personal experience of scarlatina in pregnancy or after delivery.

Dr. Chalmers stated that, in connection with disturbances in the puerperal condition, he had observed that septicæmia in the lying-in woman was associated with, and apparently gave rise to, a variety of pathological conditions amongst those in attendance; again, when scarlet fever assailed the mother, Dr. Chalmers found that it never ran its natural

course. He did not believe in the absolute specificity of disease, and did believe in the existence of a puerperal septicæmic form of scarlet fever.

The President observed that it must ever be borne in mind that some epidemics of scarlet fever were mild and others severe; that infection from a mild case may give rise to a most malignant form; and that scarlet fever poison may give rise to septicæmia, but in a secondary manner. He compared Dr. Boxall's series with evidence brought forward from other sources in the course of the present discussion. In the latter case the patients had been seen often, but once or twice in consultation, or under circumstances where thorough observation was impossible, accuracy of diagnosis questionable, or where antiseptic precautions were not employed. In Dr. Boxall's cases, the course of the disease had been observed throughout, and antiseptic precautions thoroughly and successfully carried out. In the course of an epidemic of scarlet fever, that disease had attacked some of the patients in a lying-in hospital, where sepsis had been stamped out, and in every instance had produced scarlet fever, and not septicæmia. On the other hand, we learned that, when lying-in patients were exposed to septic infection and to scarlet fever poison, septicæmia was present in all, whether scarlet fever was present or not. Since the reading of Dr. Boxall's paper, Dr. Meyer, of Copenhagen, had published a report of an outbreak of scarlet fever in the lying-in hospital of that town. Twenty-one cases were attacked, yet they all ran the usual course of scarlet fever. In support of the view that scarlet fever poison produced septicæmia, not a single case had been noted where this result had been brought about under circumstances where all possibility of septic infection had been excluded.

Dr. Boxall, in reply, first thanked the Society for the attention bestowed on his paper. He founded his diagnoses on a definite chain of phenomena, and not on the rash alone. Turning to the comparative immunity of pregnant and parturient women to scarlatinal infection, he stated that when obstetric assistant at the University College Hospital he visited a recently delivered mother; three of her children lay in the room ill with scarlet fever, and he caught the fever himself, but the woman escaped. He did not deny that the period of incubation might be prolonged in pregnancy, but showed that evidence in favor of the theory was defective. With reference to the severity of scarlet fever

in the puerperal state, Dr. Boxall quoted the collective investigation record as evidence of unusually severe cases. He recognized that the cases in his series were of a mild type, with one exception, and stated that during the same epidemic three cases occurred in private patients, two of whom died of the fever. He did not attribute the severe cases to direct inoculation through the pelvic tissues, and the mild to ordinary infection; nor did he believe that of necessity the two forms represented two really distinct diseases. He reminded the Society that very great variations in the character of the fever were well known to exist in children, in men, and in women neither pregnant nor parturient, and until these varieties were explained, the anomalies which occurred in scarlatina during pregnancy and parturition could not be understood. Turning to the septicæmia question, Dr. Boxall maintained that the direct effect of scarlatinal poison was the production of scarlatina and not septicæmia in lying-in women; but the former, like all fevers, was apt to favor the onset of septicæmia at a subsequent stage. Coincidence was readily explained: scarlet fever could not protect a woman in childbed, but that such an association was none other than accidental was borne out by the fact that when the septic element was eliminated, scarlatina and not septicæmia was the result. The contention of Dr. Playfair that the modification of individual scarlatinal manifestations was contingent on the antiseptic treatment of the puerperal state, rather than on that state itself, was disproved by the fact that in cases where no antiseptics had been used similar modifications had been proved to exist. The modification, not absence, of individual symptoms did not amount to masking. Eliminating septicæmia, the influence in the puerperal state, which really might mask the symptoms, it might be concluded that scarlatina, whether masked or not, bred true, and did not produce septicæmia. As to prophylaxis, it was wrong to suppose that cleansing the hands was the one essential precaution, for the genital tract did not hold a monopoly for the ingress of scarlatinal poison. Though the precautions recommended in the paper were open to criticism on the score of idealism, they were such as Dr. Boxall had consistently carried out in practice, and, though fully aware that their complete adoption in every case was impracticable, they had been put forward by him as embodying the correct principles of treatment. He had omitted from his paper

the bacterial question, for the germs themselves were, so to speak, on probation, and the exact relation of different organisms to scarlatina and to septic diseases was not very precisely determined.—*Lancet*, April 14, 1888.

New York Academy of Medicine.

Stated Meeting, March 15, 1888.

THE President, A. Jacobi, M.D., in the chair.

Dr. Frederick R. Sturgis read a paper on

SOME QUESTIONS IN CONNECTION WITH SYPHILIS HEREDITARIA TARDA.

He remarked that the subject is one of much interest, not only to the syphilographer, but also to the general practitioner, especially on account of its relations to the etiology of many cases met with. In certain instances the agency of syphilis is suspected, without the physicians being able to prove the actual presence of this disease. It is only very recently that the phenomena of late hereditary syphilis have been at all appreciated by the profession. During the last twenty years much has been accomplished in clearing up the matter, but, notwithstanding all the advances that have been made in this direction, many points still remain unelucidated. The question is still asked, Can hereditary syphilis remain latent for years? Until recently this was supposed to be a fact in certain exceptional cases of acquired syphilis; but the weight of evidence now shows beyond question that such a thing never occurs. Vibocq was the first to point out this mistake, and it is the generally accepted opinion at the present day, in cases apparently of this kind, that other and minor manifestations of syphilis always precede the so-called tertiary symptoms. There is always an initial lesion, although no trace of it may afterward be found.

It was at one time supposed that in all cases of hereditary syphilis the disease shows itself at birth, but the fact is now recognized that many cases occur in which the children are apparently perfectly healthy when born. Statistics show, however, that in a large proportion of cases syphilitic lesions make their appearance before the end of the third month. Of 249 cases collected by Diday and other authorities, the disease showed itself in 118 by the end of the first month,

in 117 between this time and the end of the third month, and in 14 later than the third month. Of Diday's own cases, in two the lesions did not appear until after the first year. In instances in which the disease first shows itself at a very late period, the question of acquired syphilis must always be taken into consideration.

The usual history of inherited syphilis, exclusive of those cases in which the child is born with marked lesions, is that after a few weeks or months the earlier manifestations of the disease make their appearance, such as a macular eruption or mucous patches of the mouth and tongue. At this early stage there is usually no eye or ear disease, or affection of the bones or joints. These lesions soon pass away, and there may be no further syphilitic trouble for years, or until the age of puberty is reached; when there may develop keratitis, otitis, disease of the bones or joints, or deep ulcerations in the buccal or nasal cavities. Unless the early history of the patient can be accurately learned, it may be supposed that these late manifestations constitute the first appearance of the disease. Thus, Fournier relates a case in which a man of thirty, who strongly denied ever having had syphilis, became affected with gummous ulcerations of the penis. By communicating with the patient's family physician, however, he ascertained the fact that his mother when *enceinte* with him had acquired syphilis from her husband; that at the age of two years he had had syphilitic disease of the knee-joint and peripheric ulcerations, and that when an infant he had infected with syphilis the nurse who suckled him. At the age of fourteen he had keratitis. The missing links in the history were thus furnished by the family physician. While even the diagnostic sign of the Hutchinson teeth is often absent in such cases, Dr. Sturgis expressed the opinion that in every instance of hereditary syphilis, if the history can be fully ascertained, it will be found that these later lesions have always been preceded by earlier and lighter manifestations of the disease.

Dr. E. L. Keyes said that he could state with positiveness that it had not been his experience to see any instances of what could be called late hereditary syphilis. He had met with alleged cases of this character, but in all of them he was able to detect some scar or deformity, which convinced him that the lesions referred to were not the first manifestations of syphilis in the system. He had followed up a number of individuals who were known to have had hered-

itary syphilis, and found that after various periods of latency the disease sometimes broke out again before the age of twenty-one. Before they reached the age of twenty-five, however, when crystallization of the system had taken place, the trouble had been pretty well gotten through with; and he did not recall a single instance in which a new symptom of hereditary syphilis had appeared after this latter age. Still, it is quite possible for us to believe almost anything in regard to syphilis, because it is such an irregular and erratic affection.

The character of the disease in any particular case is also largely a matter of soil; so that he did not believe in a virulent or a benign type of syphilis *per se*. The seriousness of the symptoms would depend to a great extent on the constitutional characteristics of the subject, and in this connection he referred to three boarders, all of whom had syphilis at different times, and in all of whom it produced grave lesions of the central nervous system, which, in one of them, proved fatal. Yet the third of the brothers gave the disease to a young woman, who had it in an extremely light form. The younger the subject, as a rule, he believed, the more serious the disease is apt to be, whether it is hereditary or acquired, on account of the more active changes taking place in the system during early life. Hence, the older the subject, the less serious its effects; and in the aged these are comparatively trifling.

Dr. Keyes then related the case of an infant born under his observation, in which the disease was so markedly developed that he despaired of its life. It shed its nails and had pemphigus of the soles and palms, bad snuffles, and enlarged epiphyseal extremities. He commenced treating it, however, with one-fiftieth of a grain of bichloride of mercury every two hours, night and day, and it soon began improving. At the age of six months now, was it not only alive but thriving vigorously, and it still continued to take the same dose of bichloride every four hours. In future years, if this child should have syphilitic lesions, this early history might be lost sight of, and it might, perhaps, be considered an instance of late hereditary syphilis. It is easy to see how in many instances the early manifestations of the disease may entirely escape observation or be lost sight of. The method of treatment adopted in this case was one which he had worked out some years ago at the New York Foundling Asylum, and he had always found it

very satisfactory. It was his usual practice to give a hundredth of a grain of the bichloride every hour, if practicable, and he had not found that it ever produced mercurialization or diarrhœa. In fact, at the Foundling Asylum it often had a salutary effect upon the diarrhœa from which the infants are so apt to suffer.

Dr. P. A. Morrow said that the subject under discussion had been comparatively neglected, and that it was only within the last few years that we had begun to appreciate how wide might be the impress of syphilis upon the organism. In many cases it was impossible to get at the history of the individual from birth, and he said he should be very much inclined to doubt whether any patient whatever, who manifests the later lesions of syphilis has entirely escaped the earlier symptoms of the disease. Only that day, however, he had examined a girl of eighteen, whose reputation was above suspicion, and who was undoubtedly suffering from hereditary syphilis. She was the subject of many cicatrices, while the soft palate and palatine structures, as well as other portions of the vocal apparatus had been destroyed, and she was completely aphonic; yet, in this instance, it was impossible to get any history of syphilis in infancy.

Dr. Morrow went on to say that he could see no reason why hereditary syphilis should not continue throughout a lifetime, just as the acquired disease is often known to do. It is essentially the same affection. So far as his experience went, there was absolutely no history of the early manifestations of the disease in many cases; but this was, of course, only negative evidence, and it was contrary to his general knowledge of the course of syphilis to suppose that in any instance the patient had really escaped these earlier manifestations. In conclusion, he referred to the case of an infant affected in much the same way as that mentioned by Keyes. It was apparently moribund, and it was a wonder that it lived at all. It did live, however, and several weeks later developed into a healthy child. Yet in this instance no medicine whatever was given. He did not wish to depreciate the value of mercury in such cases, but here the mother only was treated.

The new anæsthetic erthyro-ophlœine has been tested by Mr. John Tweedy, of London, who writes to the *Lancet* that the drug is irritating, and has very little anæsthetic effect.

Montreal Medico-Chirurgical Society.

The President, James Perrigo, M.D., in the Chair.

Dr. William Gardner reported a

SUCCESSFUL LAPAROTOMY FOR PELVIC HÆMATOCELE,

Due to rupture of the Fallopian tube in a case of extra-uterine fœtation. The patient, aged twenty-nine, was married in July last, and had an early miscarriage in October, for which she was attended by Dr. Arthur Browne; after this she menstruated twice, the last time on the 2d of December. Toward the end of the month she had morning sickness for a few days. During the early part of January a bloody vaginal discharge appeared, lasting nearly a fortnight. About the middle of January she was seized with violent pelvic and abdominal pains, with most alarming collapse, during which for many hours she was almost pulseless. From this, in a few days she partially recovered, but soon there were recurrences of pain, faintness and symptoms of peritonitis. Her physicians, Drs. Browne and George Ross, recognizing the nature of the case, requested Dr. Gardner's opinion, and after examination he fully concurred in their diagnosis of ruptured extra-uterine fœtation. The next day the symptoms continuing alarming, it was decided to open the abdomen. The right Fallopian tube was found expanded in a friable mass, in which Dr. Johnston afterward found the fœtus embedded in clots. In attempting to ligature this, Dr. Gardner tore it away. The pelvis was full of clots. These were scooped out and the cavity washed out with a forcible steam of water from Tait's large, blunt trocar carried to the dependent parts. A drainage-tube was then inserted and left for eight days. For the first nine days the course of the case was perfectly favorable. Then evidences of cystitis appeared, and have continued to be rather severe. There seems no reason to doubt that recovery will ultimately be complete and permanent.

Dr. Gardner remarked that such a case as this illustrates well the triumphs of modern abdominal surgery.

Regarding this particular operation, we owe all that is worth knowing to Lawson Tait, whose remarkable results in a long series of such cases are now well known. The diagnosis is not always easy, but given sufficiently alarming symptoms the abdomen should be opened and the condition found dealt with as may be necessary. It is a great satis-

faction to know that in the hands of competent surgeons the operation itself can not be said to be a source of danger.

Dr. George Ross said he had seen this case in the early stage; when he was called to her she was almost pulseless and extremely pallid, but he did not regard her condition as by any means hopeless. He congratulated Dr. Gardner on the very successful result in the case, and said that, as far as he knew, it was the first case of the kind in Canada which had been treated by abdominal section.

Dr. Shepherd asked if it was not a fact that gynecologists look upon all cases of intra-peritoneal pelvic hæmatocele as due to a ruptured tubal pregnancy.

Dr. Gardner, in reply, stated that such is the opinion of Mr. Lawson Tait, but he considered it might be produced by other conditions, as, for instance, rupture of the ovarian veins, etc.

(The specimen, showing the fœtus embedded in the mass removed, was exhibited; also chorionic villi under the microscope.)

Dr. George Ross exhibited specimens obtained from a case of

CARCINOMA OF THE STOMACH AND LIVER.

The patient, aged fifty-five, had been under observation for four months, and had never had any gastric symptoms, but suffered from profuse diarrhœa and had a haggard appearance. Examination discovered a hard mass in the left hypochondrium, which moved with the diaphragm; the liver was not enlarged. There was no pain after eating and no vomiting. The diarrhœa was controlled and patient ate and drank well, but had continuous pain in the epigastrium. The hard nodule in the left hypochondrium rapidly increased in size, and it looked as if the left lobe of the liver was the seat of the tumor, but its origin was always doubtful. Later the patient developed albuminuria and amyloid casts were found in the urine.

Patient gradually sank, and at the autopsy performed by Dr. Johnston, there was found a large fungating cancerous ulcer occupying an area nearly four inches in diameter on the anterior surface and lesser curvature of the stomach; neither the pyloric nor œsophageal openings were obstructed. The base of the ulcer was deeply fissured and had extended into the inferior surface of the left lobe of the liver. There were no secondary deposits. Nature of growth chiefly scir-

rhus. The glands in the portal fissure of the liver, stomach and intestines were in a state of amyloid degeneration. Kidneys and spleen amyloid but not enlarged. Dr. Ross said he had brought the case before the Society, not because it was a very rare one, but because it was important to recognize the fact that we might have most extensive disease of the stomach without having any symptoms referable to that organ. The occurrence of amyloid disease in these cases of malignant disease was rare, so far as his experience went.

Dr. McConnel asked if it was not a fact that in carcinoma of the stomach there was always complete absence of hydrochloric acid.

Dr. Stewart said this idea was now refuted, as hydrochloric acid is absent from the stomach in many other diseases, and had been found where cancer was present in the stomach.

CALCULOUS NEPHRITIS.

Dr. Johnston presented for Dr. Bauer, of Waddington, N. Y., (1) a kidney affected with calculous disease. The entire renal substance was destroyed. The kidney consisted of a series of suppurating sacs, each containing a uric acid calculus coated over with phosphates. The other kidney was greatly shrunken and disintegrated apparently from pyelitis, but contained no calculi. The patient had had pyrexia for years and died of uræmic coma.

(2) A specimen of secondary

CARCINOMA OF THE PERITONEUM.

The growths, whose microscopical characters were those of encephaloid cancer, were all situated beneath the peritoneal coat of the intestines, soft and vascular and varying in size from a pea to an egg. The seat of the primary growth was uncertain.

Dr. James Stuart read a paper on the

PHARMACOLOGY OF ARSENIC.

He first dwelt on the mode in which arsenic kills in poisonous doses. Three cases of fatal arsenical poisoning were related, in none of which were there any marked changes found in the gastro-intestinal mucous membrane after death. The first was that of a girl aged nineteen, who was admitted into Montreal General Hospital in September, 1887, six hours after swallowing two ounces of "Rough on Rats." There were constant retching, vomiting and intense thirst.

The pulse was very rapid and weak; vomiting and diarrhœa, which latter soon set in, continued until her death, four days after taking the poison. At the section performed by Dr. Johnston, twenty-four hours after death, there was found in the anterior surface of the stomach near the pylorus an elongated ulcer half an inch by one quarter, with firm, rounded and undermined edges. The base, which consisted of the muscularis, was smooth. There was no hyperæmia in the neighborhood or elsewhere in the stomach. Beyond slatey pigmentation of the solitary follicles, nothing abnormal was found in the intestines. In the case reported it was mentioned that everything pointed to the ulcer being "a chronic gastric ulcer," and that there was no evidence of any inflammatory action being set up by the arsenic.

The second case was that of a prostitute, aged thirty-five. She swallowed an unknown quantity of "Rough on Rats" on the 29th of September last. Eighteen hours afterward she was admitted into the Montreal General Hospital in a state of great depression. Her pulse was 150, weak and thready; there was very profuse serous diarrhœa, with occasional vomiting. She died thirty-three hours after taking the poison. There was an entire absence of any inflammatory symptoms in the stomach and intestines. Dr. Johnston, who performed the autopsy, found a large ecchymosis beneath the endocardium of the right ventricle.

The third case was one of arsenical poisoning from the application of a paste to a fungating epithelioma of the dorsum of the foot. The patient was a woman aged sixty. The prominent symptoms were purging and vomiting. Dr. Johnston, who performed the autopsy, could find no evidence of any inflammatory action in the stomach or intestine. Arsenic was found in all the internal organs, especially the liver. In this case the drug was absorbed into the blood from the wound and eliminated by the gastric and intestinal mucous membrane.

In all three cases death was brought about not by the violence of the inflammatory action, but by the lowered blood-pressure. The reader of the paper went on to say that this lowered blood-pressure is generally attributed to paralysis of the splanchnics, and that probably the best means to control it is to inject large quantities of fluid into the cellular tissue after Cantani's method (hypodermoclysis) of treating Asiatic cholera. Injection of several ounces of a weak saline solution every hour or two have proved of

great benefit in the latter disease. This, the reader of the paper contended, would be a more judicious treatment of arsenic poisoning than that usually resorted to. After referring to the most probable mode of action of arsenic in certain diseases of the skin, Dr. Stewart gave an account of a case of acute erythema multiforme following the use of a few doses of Fowler's solution. The intensely reddened skin was covered with innumerable very small papules; there was œdematous infiltration of the subcutaneous tissue of both arms. In another case under treatment with arsenic for angina pectoris, on several occasions an intense temporary erythema of the face had been noticed, and in the same case wart-like excrescences on the backs and palms of the hands, which disappeared and reappeared as the arsenic had been stopped or retaken. In both forms of rash there was desquamation, the difference being that in one case it was superficial, in the other deep.

An instance was also recorded of one of the rarest of the untoward effects that follow the administration of arsenic, viz.: brown staining of the skin. The case was one of epilepsy in a young man. Bromide of potassium caused such a disfiguring acne that each dose was combined with five minims of Fowler's solution. A few weeks after taking the mixture patient was seen, and it was found that the entire body was stained, exposed parts especially so. The staining was not unlike that seen in Addison's disease. It disappeared entirely a few weeks after stopping the arsenic. So far as is known, arsenical staining is not permanent, being different in this respect from silver staining.

Dr. Bell stated that whilst house-surgeon in the General Hospital he had seen not a few cases of poisoning from Paris green, and, as far as he could recollect, there were inflammatory lesions in all cases. He was surprised to hear from Dr. Stewart that in none of his cases these conditions existed.

Dr. Reed said that he had seen one case of arsenical poisoning where there was no gastro-enteritis.

Dr. Shepherd said that if Dr. Stewart's statement was accepted, viz.: "that arsenic did not kill by the violence of the inflammatory action excited, but by lowered blood-pressure," then we must altogether change our method of treatment in these cases. The point was a new one to him, and he thought the general impression existed that death is in all cases due to inflammatory action. He still had confi-

dence in the use of arsenic in certain diseases of the skin, namely, psoriasis and bullous eruptions, and had, in these cases, used it extensively, but had never seen the erythema or staining produced, but this was probably due to the fact that ointments were used at the same time, and in psoriasis especially it would be impossible to detect erythema or staining where chrysophanic ointment was employed.—*Philadelphia Med. News.*

Death by Suffocation in Phlegmonous Tonsillitis.

Dr. Way reports, in the *Medical Record* of February 25, 1888, a case in which he had incised the tonsils for phlegmonous inflammation, with temporary relief.

On the following morning I visited him, and found the tonsils swollen about as badly as on the previous afternoon, prior to my incising them. He reported himself as having been able to sleep some during the night, though not so well as he should have liked. His temperature was 102.6° F.; pulse 96; and general condition as good as usual in similar attacks. I applied iodo-tannin to the inflamed glands, and also an emollient poultice to the neck over the situation of the tonsils. The quinia and gargles were also continued, and the patient was advised to remain in bed. At 10:30 P. M. I visited him again, and found him in about the same condition as in the morning. His pulse was 94; temperature 102°; he had been able to take some fluid nourishment during the day, and said he believed he would be able to get out on the morrow, if he could only get some sleep.

His throat presented much the same appearance as in the morning. I again administered the hypodermatic of morphia (gr. $\frac{1}{8}$) and atropia ($\frac{1}{120}$), as on the previous evening, and a few minutes later retired to a room on the same floor of the building, two doors removed from the patient. An hour and a quarter later I was hastily summoned to attend my patient by a gentleman who was occupying the same apartment with him. His tone betokened alarm, and, without dressing, or waiting to question him, I hurriedly repaired to his room. My patient was dead! Intravenous and intracardiac injections of ammonia, with artificial respiration practiced more than a half an hour, failed to elicit at any time the slightest evidences of vitality. Examination of the body of the deceased revealed the fact that the upper

pharyngeal region and the larynx, especially the latter, contained a large quantity of pus and broken-down tonsillar tissue, derived from the rupture of the right tonsil. There were no evidences of cardiac or renal disease; *per contra*, the deceased had always, saving the frequent attacks of tonsillitis, enjoyed excellent health.

From his companion I learned that within fifteen or twenty minutes subsequent to my departure, he had sunk into a peaceful slumber, breathing quietly and without any difficulty for almost an hour. He then seemed to stop breathing for a moment, but soon made one or two ineffectual gasps for breath, which so alarmed his companion that he rushed out of the room and down the hall to my room. In not more than one minute from the first respiratory difficulty I was at the bedside, but the life-principle was then entirely extinct.

Reversed Peristalsis—Contributions to Gynecology.*

BY E. CUTTER, M. D., LL.D., NEW YORK, N. Y.

"*Reversed peristalsis* is the cause of many trials with our race, especially during labor." This dictum made by a modern worker is worthy of Hippocrates. We know what normal peristalsis is, *i. e.*, the natural vermicular movements of the alimentary canal from the mouth to the anus and from the fundus of a gravid uterus to the os in normal labor. *Reversed peristalsis* means an unnatural vermicular movement backward from the anus to the mouth of the alimentary canal and from the os to the fundus of the uterus at full term. It is possible these have not been connected ere this; still, it is high time that the connection was realized. And as food in motherhood is under consideration, it is quite right to trace here its connection at the risk of repetition.

As this is a practical work, the argument may best be enforced by living examples which serve the double purpose of proving the point and being history at the same time.

Mrs. ——, a middle-aged lady, residing in the city of ——, had had four or five children. The labors were so severe, protracted, awful and dangerous that after the birth of the last child, four physicians consulted and unanimously advised

*Extract from *Food in Motherhood.* By E. Cutter, M.D., LL.D.

her never to have another child, as it was madness to run such risks of losing her own life. The chief trouble lay in the inefficient and painful contractions of the uterus—beginning at the os and running up to the fundus (reversed peristalsis). Beside, she had rheumatism with gravel. The enlarged fibrine filaments in the blood—the thrombi and emboli of fibrine and crystals—blocked up the blood-vessels. Her stomach was irritable; vomiting frequent, nausea; bowels constipated; heart weak and overloaded with work; dyspepsia and indigestion; mal-assimilation, etc.

It so happened that her husband was under Dr. Salisbury's care about this time for chronic disease, and the matter of the consultation of physicians was brought to his notice. He was asked if there was not anything he could do for the rheumatism. He said, "Yes," and she went on treatment, which included hot water and beef, with alteratives and eliminating medicines for the gravel and fibrine filaments. The result was that she regained her health. The morphology of the blood became normal. She became pregnant, and had no nausea or disturbance of the alimentary canal whatever, and, at full term, was delivered of a healthy child ere any medical assistance arrived. She had plenty of breast milk. Her labor was almost painless.

Of course, such speedy labors are not desirable, but the case illustrates the point which was thoroughly made out in this case.

In another family were two child-bearing women, who were in the habit of having hard labors. In both these ladies, by establishing the normal peristalsis of the alimentary canal, normal peristalsis was also established in the uterus, and normal and easy labor followed with healthy offspring and lactation.

Natural feeding, or feeding according to the rules of nature, will ensure natural labors, other things being equal. Does the æsthetic pleasure of eating food that reverses the normal persistalsis, that produces nausea, that causes indigestion, ropy adhesive, red blood corpuscles, blood crystals, thrombi and emboli, reversed peristalsis of the uterus with protracted, inefficient, useless, weary, sometimes child-killing pains or contractions—is this food pleasure, I say, to outweigh the pleasures and advantages of healthy blood, normal downward peristalsis of the alimentary canal and the uterus, a normal easy labor, a healthy offspring with strong constitution, a household rejoicing with exceeding great joy

because a new individual has come to be loved, to love and to add to the domestic happiness?

These things are worth thought. If the mother will live by the rule here enforced (*i. e.*, two-thirds animal food, and one-third vegetable food), these results can be secured as the experience of others and myself have shown. — *Va. Med. Monthly.*

Treatment of Chronic Bronchitis in Children.

BY THOS. J. MAYS, M.D.,

Professor of Diseases of the Chest in the Philadelphia Polyclinic.

A GOOD deal is said in our text-books on the treatment of acute bronchitis in the child and in the adult, but there are cases constantly occurring in the practice of every physician which do not fall under the description of the acute form of this disease, and which pursue rather a chronic or subacute course. A child from two to ten years old, and even younger, is brought before you, who has had a cough for some time, which is accompanied by yellow expectoration in the morning, but is of a lighter color during the day. The child is able to be about, but its respirations are accelerated, and are short and shallow; the pulse is quickened; there is occasionally a flush in the face, probably a slight rise in temperature, night-sweats, loss of flesh, dyspnœa, poor appetite, coated tongue, and the presence of general debility. On inquiry you will find that some months previously this child contracted "a cold," or had an attack of measles, or whooping-cough, from which it made an imperfect recovery and consequently has not felt well since.

Palpation of the chest probably reveals a fremitus over the central portion of the chest, both anteriorly and posteriorly; there is no dullness, but rather increased percussion resonance, and a roughened, blowing respiration is heard over the whole chest which may be accompanied by rhonchi, mucous and sibilant râles, audible especially in the morning after rising. Coughing will remove the râles, but not the blowing breathing.

Quite an extended experience in the treatment of these cases teaches us that persistent counter-irritation is of the first consideration. If there is much impediment to the ingress and egress of air, or, in other words, if there is much

dyspnœa, the child is at once placed in bed, the chest is enveloped with a hot flaxseed meal poultice (covered well with oiled muslin) which must be changed every three hours. In most cases, however, it is not neeessary to order the child to bed, and counter-irritation is produced with a mild croton oil liniment. Croton oil and sweet oil, well mixed in the proportion of one to two parts of the former to six parts of the latter, is well rubbed into the skin of the child's chest—in front, under the arms, and between the shoulder-blades, not with a flannel or cloth, but with the mother's or nurse's fingers, twice a day, and then the chest is well covered with a layer of cotton-wool. It is important that as much as ten or fifteen minutes be spent in rubbing the liniment well into the skin, after which the hands must be thoroughly washed. In the course of four or five hours a red blush of the skin will appear, ending in fine, yellow-pointed pustules. Simultaneous with this eruption the cough becomes easier, the expectoration more free, the dyspnœa less—in fact, the most remarkable change will be brought about in the little patient.

Our attention was first called to the usefulness of this application by Dr. Park in a short contribution to the London *Practitioner* for March, 1882 (p. 170), and, although he principally recommends it in acute bronchitis, we can say that we have found it as useful in the form of bronchitis here described as he did in the acute form of the disease. Indeed, we may add that we have also given it a fair trial in acute catarrhal affections of the chest in children, and never had any reason to feel disappointed with its action.

The internal treatment must be directed toward a stimulation of the bronchial mucous membrane, and toward a recovery of the appetite. The former will be attained in a great measure by the following combination:

℞.—Ammoniæ murias, . . ℥j.
Ex. euphorbia pil. fld.,
Tinct. digitalis, . . . āā fl. ℥iij.
Atropiæ sulph., . . gr. $\frac{1}{70}$.
Chloroformi, . . . gtt. xij.
Syr. tolu,
Syr. picis liquid, . . āā q. s. fl. ℥j.
Aquæ, . . . ad. q. s. fl. ℥iv. M.

Sig. One teaspoonful every three hours.

For the purpose of aiding digestion, and as a general tonic, the following will be found useful:

℞.—Acid. phosphorici (dil.),
Acid. nitro-muriatic. (dil.),
Acid. sulphuric. aromat.,
Tinct. ferri chloridi, . . āā fl. ℥ss. M.
Sig. Thirty drops in sweetened water after each meal three times a day.

The diet should be exceedingly liberal, although no food must be allowed which is likely to disagree. Our main reliance must be placed on rich milk, soup, oatmeal, beef, mutton and other kinds of nutritious food. At no time during the treatment is it necessary to confine the child within doors during pleasant weather. Indeed, outdoor exercise should be encouraged as much as possible.—*Med. Progress.*

Intubation.

Dr. W. C. Cheatham, of Louisville, Ky., says (*South. Pract.*, March, 1888,) that Desault accidentally demonstrated in 1881 that the larynx would tolerate a tube by passing one through the nose into the larynx which he was trying to pass into the œsophagus. Bouchut, in 1848, established, that (1) tubage is easy by means of a canula fastened on the inferior vocal cords without interfering with the epiglottis; (2) the larynx tolerates a canula; (3) croupous dyspnœa and other laryngeal affections can be relieved without tracheotomy; (4) the membrane is expelled through the tube with facility; and (5) tubage is of great advantage to country doctors who can not get assistance. But Trouseau ridiculed the idea, and it was soon forgotten. But Dr. O'Dwyer, of New York, who knew nothing of this history, resurrected intubation in 1880, and now it is firmly established. It is successful in about the same per cent. of cases (about 26) as tracheotomy, and does not present the horrors of that operation. After describing the instruments that come with "O'Dwyer's case," he says the child should be wrapped in a shawl so as to pinion its arms. The head should rest well upon the left arm of the assistant, seated in a high chair, while another assistant holds the head firmly and watches the gag. Around the left forefinger wrap

some surgical plaster that sticks to itself only; and if the child is able to bite, wear on this finger a broad silver ring reaching from the second to the third joint. Thread the tube and attach it to the introductor. Pass left forefinger in right side of the mouth—the gag being on the left side—well back until the epiglottis is felt (which is sometimes hard to recognize in the young, especially if œdematous), or the opening of the larynx is felt. Then with the left hand pass the introductor with the tube in the right side of the mouth—starting with the handle vertical, bringing it gradually up to a horizontal position as the tube passes gently back along the palmar surface of the finger of the left hand, until it gets to the mouth of the larynx, when it usually glides in easily. The thumb of the right hand now pushes the button or the handle forward; the ejector dislodges the tube from the obturator; the forefinger of the left hand is placed on the head of the tube to hold it in position; the obturator is withdrawn; the tube is pressed well into the larynx; the finger is withdrawn, the gag removed, and the thread pulled to one side of the mouth. Dyspnœa is instantly relieved; the child coughs a little, and the thread gags a little. But the thread is left in a few minutes until you are sure the tube is in the proper place, and not plugged with membrane. Then the finger is introduced again (with or without gag) resting the end of the finger on the head of the tube to hold it in place, and the thread withdrawn. One end of the double thread should be cut as short as practicable, so that as little will have to be withdrawn through the eye in the tube as possible.

Semi-solids and solids can be eaten without trouble, but drinking or the administration of fluids gives trouble. The tube prevents closure of the larynx by the epiglottis so that fluids enter the windpipe, causing violent coughing, strangulation, bronchitis and pneumonia. To overcome this difficulty of swallowing fluids, put one end of a tube from a feeding bottle, in a glass of the fluid (or, if the child is old enough, use a glass tube); place the patient on the stomach, with head lower than the chest, and let him draw the fluid up, and of course none can enter the larynx. If the child does not understand, pump the fluid up with a syringe, so as to let him get a taste, and discover for himself that he can take the fluid without strangling.

The tube has been worn from an hour to fourteen days. There are no certain indications of the time to remove it.

Always be prepared to introduce another tube at once should the emergency require it. To remove the tube, first feel the head of it with the forefinger of the left hand, pass the extractor along the palmar surface of this finger, the opening of the tube felt for, the extractor entered, make pressure on the lever with the thumb of the right hand, and make traction up and back, and withdraw the tube.

Among the dangers or accidents of intubation, the tube may pass into the œsophagus, or a false passage may be made, or the diphtheritic membrane may be pushed down before the tube and trachea occluded; the tube may slip between the cords into the larynx—all of which dangers can be avoided by care.

Intubation gives better results than tracheotomy in children under three or four years old, and as good in older children. It is best in œdema of glottis, and strictures of the larynx and of trachea. The O'Dwyer tube extends to within half an inch of the bifurcation of the trachea. Half of the calibre of the tube may become occluded without embarrassment to respiration, and secretions can be coughed up with much less difficulty than after tracheotomy. Dangers of tracheotomy are primary and secondary hæmorrhage; tracheal incision may be too short or too long, or to one side, too high or too low, or made through and through the trachea; or the canula may be passed outside of the mucous lining of the trachea, pushing the membrane before it—the canula not getting into the trachea at all. Such a failure occurred once to so good a man as Dr. Jacobi. Many other dangers of tracheotomy are mentioned.

Another Triumph of Laboratory Research—Tasteless Preparations of Cascara Sagrada (Rhamnus Purshiana).

(Abstract of an article entitled "An Examination of Cascara Sagrada," by H. F. Meier and J. Leroy Webber, published in the *American Journal of Pharmacy*, February, 1888.)

Recent investigation of the constituents of Cascara Sagrada has led to the discovery of new principles and facts of great importance pharmaceutically and therapeutically.

The chief objection to Cascara Sagrada heretofore has been its inherent bitterness. In the light of recent

researches, tasteless preparations of this drug highly efficacious medicinally are now to be had.

These discoveries mark a distinct advance in pharmacal attainment and in the therapeutics of chronic constipation, since this remedy can now be much more generally and persistently administered, and its well-known tonic laxative action obtained without the drawbacks which seemed formerly inseparable from its employment.

The facts disclosed concerning this remedy deserve more than a passing notice, especially since they indicate the existence of principles and modes of action extending far beyond the subject indicated, and are well worth the close attention of the thoughtful and scientific physician. A valuable contribution to the knowledge of the chemical constitution of this drug appeared in the *Amer. Journal of Pharmacy*, for February, 1888, which makes it possible not only to obtain a true interpretation of the various clinical observations, but clears up apparent anomalies, and also indicates the reasons for observed effects, which have lately been disputed, but now admit of no further question or misunderstanding.

Among the discoveries referred to in this valuable paper, of especial interest to the physician, is the influence of a class of vegetable ferments and their recognition as the causes of various abnormal conditions, such as colic, vomiting, nausea, diarrhœa and dysentery, which occasionally attend the administration of certain drugs.

It appears that Frangula bark, when fresh, contains such a ferment in excessive quantities, and is, therefore, unfit for use until the ferment has exhausted itself—the process usually occupying several years. It also appears that Cascara contains some of this principle, and this fact will account for the occasional untoward effects of the drug, which have been observed as consequent on the employment of a number of its preparations heretofore in the market. These effects are, therefore, not due, as has been supposed, to any idiosyncrasy on the part of the patient, or to the laxative or tonic constituents of the bark itself, but to a distinct objectionable principle, which, once recognized, can be rendered inoperative and harmless.

It has been reserved for Parke, Davis & Co., through their exhaustive investigations, to be the first to clearly recognize the principles involved, and by the application of such intelligent comprehension, to formulate and adopt

correct pharmaceutical processes and thus overcome all the difficulties heretofore existing. As a result of their investigations, they now offer to the medical profession a fluid extract, a solid extract, and also a concentration, all of which (designated as "Formula of 1887") exhibit only the desirable laxative and tonic properties, and being free from this ferment, are incapable of producing griping, nausea or any of the mal effects above enumerated.

It appears that these ferments are distributed through a large number of vegetable substances, being not confined to unripe fruits only, but can also exist in the root, bark, leaf, or even in vegetable extracts, of which we have illustrations in various juices, liquid or inspissated. Of this latter class, aloes will serve for an example. A familiar illustration of an unaltered vegetable would be the cucumber, the green apple (familiar to the school-boy), and unripe fruit generally. In the case of the cucumber, experience has taught the means of removing this ferment by dialysis or osmosis. We sprinkle salt over it or surround it with a strong brine, which provokes an outward flow of the fluid containing the ferment, with the result that the ferment is, to a large extent, removed, and thus rendered incapable of producing the same conditions in the stomach, for which it was intended in the plant; that is, the creation of vegetable acids from other material previously existing, in the same manner that pepsin, likewise an unorganized and soluble ferment, provokes the solution of fibrin and albumen, forming peptone, or as diastase is capable of effecting the transformation of starch into soluble glucose and dextrin, both new bodies.

That these ferments all bear a direct quantitative proportion to the results accomplished, has been practically recognized. We are promised a satisfactory indication of the sources of the acids formed in the plant, which will enable us to corroborate the statements that identical processes go on in the stomach when the ferment is permitted to exert its action there.

The physiological tests now being conducted at the laboratory of Parke, Davis & Co., with the different principles contained in the plant, can not fail to demonstrate finally not only the superiority of Cascara itself, to its former supposed competitor Frangula, but also its comparative value as a laxative.

To physicians desiring fuller information concerning the

discoveries made, a reprint of the article from the *American Journal of Pharmacy*, and a working bulletin descriptive of this drug, will be mailed by Parke, Davis & Co., free on request.

Microscopy.

The Discovery of the Bacillus of Scarlatina not a New Discovery.

We subjoin a couple of letters, the contents of which will explain them. Dr. Barnsfather, who is the author of the first one, graduated at a college of pharmacy in England quite a number of years ago, just previous to studying medicine, and, consequently, has been for a long time proficient in microscopical manipulations. In England, probably more than in this country, pharmacists employ the microscope for the purpose of detecting adulterations of medicine, and, therefore, become accustomed to subject specimens of all kinds to microscopical examination. This habit, no doubt, led the doctor to subject the specimen mentioned in his letter, to inspection by the microscope; for, according to our recollection, he was not impelled to do so by any anticipation of discovering bacteria, microbes, micrococci, bacilli, or any other kind of *vermin*. His letter is addressed to a well-known and highly esteemed physician of Cincinnati, Dr. H. Cundell-Juler, M.R.C.S.—EDITOR OF MED. NEWS.

DR. H. CUNDELL-JULER:—

My Dear Doctor:—During my recent attack of rheumatism, I took a notion to look over an old portfolio filled with notes, manuscripts, microscopical drawings, etc. It was sealed up carefully eleven years ago (previous to my going to Europe for my health), and since then had never been opened. Among other relics of the past, I found one in which you are intimately connected with the chain of circumstances surrounding and emanating from it. In fact, without your assistance I would not to-day have it to refer to with pride over the discovery made at that time, but suppressed for reasons which will be given below.

On June 8, 1875, I was called to see Miss F. B., and found her suffering from scarlatina maligna; and, being then

satisfied that the child would die, I recommended the parents to call you in consultation and attendance upon the case, as I wished to divide responsibity, etc., which was done, and you attended until her death on the 27th day of June, 1875. The terrible and persistent fight which we made during those days to save her life will forever remain green in my memory.

On June 26, you aspirated the thyroid gland with a hypodermic syringe, and gave me the contents on a glass slide for microscopical examination. The day following our patient passed away from asthenia. I examined the glass slide microscopically, and made a careful drawing of it for the medical press.

Upon presenting my sketch to the editor of the CINCINNATI MEDICAL NEWS, whose wise and friendly counsel I always availed myself of, and telling him that I had found the bacillus of scarlatina maligna, and detailing the full particulars of the case, he, after looking at the drawing and studying it for a little, advised me to take it home and put it away carefully for reference in case I ever had another case like it, and then compare notes, etc., as then it would be time enough to bring it before the profession ; also stating that the doctors would only laugh at me if I brought such a thing before them, and that no such thing as a scarlet fever microbe had ever been heard of, etc., and more in the same strain.

I took Dr. Thacker's advice and put it away safely with my notes in reference to it, so that at some future time I could verify my investigations by my past labors.

It is now nearly thirteen years since I took the pictures of those comma-shaped bacilli from the microscope, and have *not yet* been able to verify the microbes, as I have never met with such a malignant case, although I have attended hundreds of scarlet fever patients since that time. From my notes on the microscopical appearance of the fluid on the slide, I find that the bacilli were comma-shaped, or had a curled flagellum, and clustered here and there, while surrounding them and evenly distributed in the menstruum were thousands of minute granules of a purple color (which I supposed were spores) ; two or three epithelial scales were also present.

I see by a recent medical journal that some microscopist in Europe has lately discovered the "Bacillus Scarlatina." I would like to ask the gentleman, whoever he is, if the one

I discovered thirteen years ago tallies with the one he has been investigating. No doubt he will get the credit of being the discoverer, although the facts are against him.

"Facts are stubborn things,
They are chiels that winna ding."

I am, my dear doctor, Respectfully yours,
JAMES BARNSFATHER.

DAYTON, Ky., April 8, 1888.

CINCINNATI, O., April 15, 1888.

DR. BARNSFATHER, DAYTON, Ky.:—

My Dear Sir:—Your letter of the 8th inst. was duly received, and have waited a day or so hoping I might overhaul a book having notes on the case.

Although every disease now has a bacillus as the *fons et origo* of the disorder, still there are but three that can claim universal recognition as being inseparable from their special forms of disease. This subject was discussed when I was present at the International Medical Congress at Washington.

I should suppose, now that the laugh has been round, that Dr. Thacker, whose advice at the time was given in a wise and friendly manner, would not object to publishing any remarks you may wish to make on the subject. If you could start a controversy, so much the better for both the bacillus and the "savs."

A call from you will always be received with pleasure, and then you could speak upon anything further that you may desire. Yours truly,

HENRY CUNDELL-JULER.

The Uses of the Microscope, Explained by Prof. Wythe.

IT AIDS MEDICINE, POINTS OUT ADULTERATIONS AND HELPS TO DETECT CRIME.

The lecture-room of the Cooper Medical Institute was well filled when Prof. Joseph H. Wythe, the microscopist, began his lecture upon "The Microscope as a Detective." The lecture was highly entertaining, and teemed with practical illustrations which were both amusing and instructive.

In opening his address Prof. Wythe said that no invention of modern or ancient times equaled in interest and general

usefulness that of the microscope. For many centuries after it was discovered that a globule of water contained magnifying power, the use of the microscopic principle was not utilized. It is only three hundred years since Zacharias Jansen made the first compound instrument of that kind in Holland. Then followed improvements on the old method of adjusting lenses. The greatest discovery of Galileo, that of Jupiter's satellites, was made by a small telescope which would be regarded as comparatively useless in this advanced age of telescopic as well as microscopic search. These improvements have been so wide-spread and beneficial that navigation or commerce can not dispense with the telescope any more than can medicine or the sciences with the microscope.

"The use of the microscope," continued the lecturer, "has become general among people of intelligence and discernment. Its use aids in the detection of disease, crime and the adulteration of products. The microscope is nothing but an eye, and the eye is nothing but a window of the soul. By its use has every portion of the human structure liable to disease been analyzed, and the causes as well as effects of disease been discovered. The study of bacteria by Heck in 1675 with the aid of the microscope was fruitless of results until Pasteur, in 1881, followed Heck's ideas and actually carried them out by the aid of appliances to which Heck could not have had access. France was losing 100,000,000 francs per annum by a malignant silk-worm disease until Pasteur put a stop to the damage by pointing out the cause of the trouble and its remedy, all of which he obtained by an intelligent use of the microscope. This is said to be an age of adulterations, and the microscopist of experience knows it to be true. The microscope serves humanity by bringing these deceptions to light. With its use we can detect foreign matter in substance and unerringly point out the right from the wrong. So wide-spread is this habit of adulteration as indicated by microscopists, that efforts are now being made at Washington to have rigorous laws passed prohibiting unscrupulous men from robbing people not only of their money, but of their health, by introducing poisonous substances into food. If a reform be worked in this regard, it may be attributed to the use of that little but useful thing, the microscope."

Prof. Wythe then spoke of the microscope and its uses in the detection of crime. By its use have murderers been

brought to justice and accused innocent men acquitted. Its use in courts of justice has become universal, and the most skillful forger's efforts prove fruitless when his handiwork is displayed for critical inspection beneath the microscopical lens. The physician can detect disease, and the scientist matures most profound secrets with its aid. While the telescope takes us far away to other worlds, and reveals to us their hitherto buried mysteries, the microscope explains to us the things of life which surround humanity, and points out remedies which, if acted upon, will be of inestimable service to mortal man.—*Pa. Record.*

MICRO-ORGANISMS IN INHERITED SYPHILIS.—Doutrelpont says that early last year Kassowitz and Hochsinger reported the detection in the organs of five cases of hereditary syphilis of streptococci, which were contained within capillaries or their vicinity. These cocci differed from others in that they were not associated with suppuration. The authors refrained, however, from stating their precise significance. Kolisko, who had made numerous preparations from syphilitic infants dying within a day or two after birth, had failed to find streptococci, except in one case of furunculosis, and this he attributed to infection by the streptococci pyogenes. Again, Chotzen, in Neisser's clinic at Breslau, had discovered streptococci occasionally in the bones, skin, liver and intestinal mucosa of subjects of hereditary syphilis. But he looked upon their occurrence as accidental, although there is no doubt these particular microbes are different from those of erysipelas and suppuration. Chotzen suggests that the cases in which they occur are cases of mixed infection, and that a streptococcus-septicæmia may be the cause of death in many cases of hereditary syphilis. The ulcerated surfaces of the mucous membranes might be the entrance of the streptococci. Doutrelpont says that in pursuing his researches upon bacilli in syphilis hemet with streptococci in papules removed from an infant that died fourteen days after birth. No lesion of bones or internal organs was found in this case. The histological examination of the affected skin showed the horny layer of the epidermis over the papules to be raised up, and between this and the rete mucosum were masses of streptococci and staphylococci, especially abundant in the hair-follicles and ducts of the sebaceous glands. The cutaneous papillæ were infiltrated

with small cells, especially around the vessels, and streptococci were met with here also. The blood-vessels were for the most part free from cocci, but in a few which contained blood streptococci were seen between the corpuscles. On the other hand, the lymphatic channels were blocked with the micro-organisms, some of which were even detected in the subcutaneous tissue around the sweat-glands and between muscular fibres. By using special double-staining methods, the author was enabled to display in the same specimens the bacilli which have been described as characteristic of syphilis, although they occurred but sparsely. He believes that the streptococci have no relation to the syphilitic process, for he has never met with them in all his previous and numerous examinations of syphilitic products. He inclines to Chotzen's view, that their presence is due to a septic infection, which the cutaneous and mucous lesions of syphilis render possible.—*Centralblatt für Bakteriologie.*

Gleanings.

Effects of Distant Therapeutic Agents.—The recent claim made for therapeutic agents, that their remedial effects could be exercised even at a distance from the body of the patient, has been totally exploded by the results of the investigations on the part of a committee appointed to examine into that claim.

The effects were nothing more than could be produced by "suggestion" to hypnotized patients, as was clearly proved by bringing a bottle filled with water near the subject, and informing him that it was alcohol or cherry-laurel water, or any therapeutic agent which entered the mind at that moment, when symptoms dependent upon the administration of such drugs immediately manifested themselves, provided they had been suggested to the patient previously while in a state of hypnotization. Numerous methods were pursued to prove the incorrectness of the position taken by Dr. Luys, in assuming that it was the direct effect of the drug itself upon the patient, and the conclusion was that such influence could not be said to exist.

A Cerebral Centre for Movements of the Stomach.—Dr. B. A. Hlaska performed experiments upon seventy-six

dogs; they consisted in exciting different parts of the cerebrum with an uninterrupted current. He found that the center for the contraction of the cardiac end of the stomach lay in the corpora quadrigemina, and that the connecting nerve filaments ran along the cord, but mostly with the vagus. The center for the contractions of the lateral portions of the stomach also lies in the corpora quadrigemina, but the filaments run only along the cord. The center for the expansion or opening of the cardiac end of the stomach lies at the lower anterior end of the nucleus caudatus, close to the anterior commissure. The communication is established by means of the pneumogastric. On account of the above facts Dr. Hlaska doubts the existence of a single center for nausea or vomiting, and considers it a complex action, in which the abdominal and respiratory muscles as well as the stomach itself take part, and that the impulse originates in more than one center.

Treatment of Quinsy.—Dr. W. E. Green, in the *British Medical Journal*, 1887, p. 1,151, strongly recommends the following prescription for quinsy:

℞. Tr. aconiti, ... 8 parts.
Tr. guaiaci, ... 15 "
Glycerinæ, ... 7 "

M.—Dose for an adult, twenty drops every hour until distinct improvement appears, and after that every four hours.

The dose for children is smaller in proportion to their age. Dr. Green mentions the case of an infant, only eight months old, with quinsy, to which he gave a drop and a half of tincture of aconite every hour for a day and a half, without any ill effect, and which recovered.

Chronic Tea Poisoning.—Dr. Bullard gives, in the *Boston Medical and Surgical Journal*, the details of seventy-four cases of chronic tea intoxication investigated by him. His conclusions are that the action of tea is cumulative; its action is more pronounced on the young and on those subject to anæmia or physically depressed, although persons otherwise healthy, occasionally show toxic symptoms; the average amount of the beverage required to produce poisonous effects in persons accustomed to its general use is a little less than five cups per day. Chronic tea poisoning, Dr. Bullard asserts, is a common affection, its symptoms being

usually loss of appetite, dyspepsia, palpitation, headache, vomiting and nausea, and nervousness combined with various forms of functional nerve affections, such as neuralgia, hysteria, etc. Besides these, constipation and pain in the left side are frequent.

A Means of Protection against Mosquitoes and Gnats.—Pour a small quantity of a two per cent. carbolic acid solution into a saucer. Dip the fingers into the liquid, and sprinkle sheets, coverlet, pillows and bolster, on both sides, the edges of bed-curtains, and the wall next the bed. The face and neck may also be slightly wetted with the solution. Not a single gnat or mosquito will come near, and a comfortable night's rest may be looked forward to.—*Union Medicale.*

Keeping Baby Quiet.—A lady in Pensacola, temporarily deprived of the services of a nurse, has adopted a novel mode of keeping baby out of mischief and in content at the same time. Placing all his playthings in a large wash-tub, she puts the little fellow in with them, and there he plays, unable to get out and perfectly happy until he gets sleepy or hungry. The father calls the boy Diogenes.—*Savannah News.*

Pleurodynia.—Dr. R. P. Davies, of Petty, Texas (*Daniel's Texas Medical Journal*, February, 1888), thinks this disease is poorly understood and treated. The cases seen by the writer had the following symptoms: Sitting posture; great pain in and around the heart, or near it, with dyspnœa; respiration short and shallow; face bleached or sallow; eyes protruded, with dark circles around them; no fever, with pulse a little quickened; some coldness of the skin; kidneys, and especially the bowels, rather obstructed; urine high-colored and burning; appetite variable; previous cervicodynia, and sometimes lumbodynia, or both, which disappeared a day or two before the pain settled in the breast and sides. Most of the cases were attacked at night, after a few hours' sleep. Treatment consisted in purgation, diuretics, diaphoretics and counter-irritation. The first prescription was the following:

℞.—Hydrarg, chlorid. mitis, . . gr. xxx.
Aloin, ... gr. vj.
Sodæ bicarbonat, . . . gr. xv
M Div. in pulv. No. iii. S. One every three hours.

Castor oil or salts, if necessary. After purgation:

℞.—Potass bicarbonat, ... ℥j.
Potass nitrat, ... ℥ij.
Tinc. guaiac, ... ℥ij.
Vin. colchici, ... ℥ij.
Fld. ext. buchu, ... ℥ij.
M. S.—Tablespoonful in a wine-glass of sweetened water every three hours.

As a counter-irritant, a Spanish fly blister, four by six inches, between the shoulder blades, just below the nape of the neck, and allowed to remain on for three hours. As soon as the blisters came, pain would cease and improvement begin. Then the following:

℞.—Syr. sarsæ. comp. . . . . ℥iv.
Syr. ferri. iodid, ... ℥j.
Potass. iodid, ... ℥j.
Tr. cinchon. comp. . . . ℥iv.
M. S.—Tablespoonful before each meal.

Novel Theory in Regard to an Additional Function of the Liver.—Dr. F. A. Schmitt, of Schulensburg, Texas (*Daniel's Texas Medical Journal*, February, 1888), refers to an article found in a late German journal, in which the view is expressed that, although a germicide may be found for each germ, still, we are only assisting nature, after all. The liver and skin are the avenues by which microbes escape from the system, and the theory is that we must stimulate the liver to healthy action, in order to produce the effect desired. "It is not the remedy or remedies with which we cure, but it is, as it ever was, the exact interpretation of the language of nature which should determine our action in regard to treatment, and he is the ideal physician (or surgeon) who fully understands, comprehends and skillfully interprets the idiom of nature."

Dysentery.—Dr. S. H. Cowden, of Solgohachie, Ark. (*Daniel's Tex. Med. Jour.*, February, 1888), recommends the following injection when the stools are fœtid and contain blood:

℞.— Mucilag. amyli, . . ℥ij.
Pulv. ipecac, . . . gr. xx.
Morph. acetat, . . . gr. ¼ to ½—M.

Patient is placed on the right side, and one-half injected; then on the back, and the other half injected. The formula given is beneficial in the dysentery sometimes attending the puerperal state.

Relation of Fistula in Ano and Phthisis Pulmonalis. —Dr. Joseph M. Mathews, of Louisville, Ky. (*Atlanta Med. and Surg. Jour.*, February, 1888), quotes from authorities in the past, upon this subject, and considers the justness of their views. The writer bases his opinions upon clinical facts, and reaches the following conclusions: "In incipient phthisis, the operation is always justifiable, other things being equal; in the rapid, progressive fistula, an operation should be done to save tissue and prevent serious consequences; if great cough exists, it should militate against the operation; if it can be determined that the sinus is single, and the discharge, inconvenience and pain are not great, advise against the operation."

The Feeding of Infants Deprived of the Breast-milk. —No physician should recommend a food, as he would not a medicine, without knowing its composition, and the composition of most of the recent dietetic preparations, ending with Carnrick's, has been announced. Carnrick's food contains a large percentage of the solid constituents of milk, the casein of which has been partially digested, so as to resemble the casein of human milk in its behavior under the digestive ferment. The other ingredient is stated to be wheat flour, subjected to prolonged baking, so that its starch is, to a considerable extent, converted into dextrine. This food has the advantage of easy preparation in the nursery, and easy digestion. Used alone, it is sufficiently nutritious for the infant. It will probably supersede some of the older foods of the shops. Poor families who can not afford to use it as the sole food, will, according to my observations, find it useful made into a thin gruel, and employed in diluting the cow's milk with which these infants are fed. —*From an article by J. Lewis Smith, M.D., Professor of Clinical Diseases of Children, Bellevue Hospital Medical College*

Ingrowing Toe-nail.—Dr. B. Cotting, in the Boston *Medical and Surgical Journal*, describes the method of operating on this painful condition that he has practiced with success for many years. It consists of removing the diseased soft

tissues from the nail, and not, as is usually done, the nail from the soft tissues. He removes with a knife the diseased fleshy parts, together with a large and thick slice of the healthy and adjoining side of the toe; the edge of the nail should be exposed, but not injured. Dr. Cotting regards this as the simplest operation ever devised for the relief of ingrowing toe-nail. As the wound heals, the remnants of the lateral fleshy nail furrow, if any remain, together with the soft parts adjoining, are drawn in by the contraction, and in this manner are kept away from the edge of the nail. Thus the nail after this, in its ordinary growth, has nothing to imbed itself in, or even to impinge upon, and a return of the affection is out of the question.—*Birmingham Medical Review.*

Book Notices.

A Guide to the Practical Examination of Urine. For the Use of Physicians and Students. By James Tyson, M.D., Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania; One of the Physicians to the Philadelphia Hospital, etc. Sixth Edition. Revised and Corrected. With a Colored Plate and Wood Engravings. 12mo. Pp. 253. Cloth. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price, $1.50.

The work of Professor Tyson on Examination of Urine has been so frequently noticed and described by us at length, that it is scarcely necessary to say any more in regard to it than to announce the fact that a sixth edition of it is now published. No work on urinary analysis is better known than it is, or more highly esteemed. It is recognized and quoted as an authority.

But few medical works reach a sixth edition. They are generally supplanted by new works by the time they have reached two or three editions, or before. But Professor Tyson's work is probably more popular to-day with physicians than it ever was. This is because it has been prepared with great ability and care, and meets a want which is not fulfilled by any other one.

Although the work has been thoroughly revised and corrected, and new material taken in, yet the present edi-

tion is no larger in size than the preceding one, for the reason that an amount has been omitted equal to that added. The most important additions have been the new tests for sugar, by phenyl-hydrazin hydrochlorate and by alpha naphthol and thymol.

THE LANGUAGE OF MEDICINE. A Manual Giving the Origin, Etymology, Pronunciation and Meaning of the Technical Terms found in Medical Literature. By F. R. Campbell, A.M., M.D., Professor of Materia Medica and Therapeutics, Medical Department of Niagara University. 8vo. Pp. 318. Cloth. New York: D. Appleton & Co. Cincinnati: R. Clarke & Co. Price, $3.

"The object of this work," says the author in the preface, "is to provide the medical student with a suitable means of acquiring the vocabulary of his science. Like Shakespeare, the great majority of medical students have but 'small Latine and less Greeke.' Even those who have enjoyed the advantages of literary colleges are often unable to apply their knowledge of the classical languages in determining the etymology and meaning of ordinary medical words; partly because the classics are studied more from a literary than a philological point of view; but largely because the words most used in medical works seldom appear in the Latin and Greek with which they are familiar."

A student of medicine who, before he began the study, had a knowledge of Latin, has greatly the advantage of one who, although he may have a very good English education, has no knowledge of Latin. Medicine is full of technical terms, expressed in Latin. In the department of anatomy, the Latin names of muscles express either their office, their origin or insertion, or some peculiarity. Consequently, with the Latin scholar, the expression of the names imparts information that must be a matter of separate recollection with one who is ignorant of Latin. Take, for instance, the name of a little muscle of the face—*levator labii superioris alæque nasi*. Now, it would be almost impossible for any one knowing nothing about Latin to remember this terribly long name, for there would be no meaning in it to him. But the Latin scholar recognizes at once that, literally translated into English, it means "the

elevator of the upper lip and of the wing of the nose." Consequently, he has only to call to mind the office of the muscle to remember the name.

Professor Campbell, in issuing his work, has been impelled to do so by the praiseworthy desire to relieve, as far as possible, the disadvantages which medical students labor under who are altogether ignorant of Latin. He hopes to give them sufficient insight in the structure of the language, without being under the necessity of regularly studying it, as to place them nearly on a level with those who have a classical education. In Part Second of the work, therefore, will be found the majority of the Latin words, with their meanings, used in medical works. The principles of Latin grammar which are employed in nomenclature and prescription writing are discussed, and exercises for translation are given, in order that the student may fix the words and grammatical principles in his mind. There will be found declined nouns belonging to each of the five Latin declensions; also, examples of declension of adjectives. There will be found the old familiar declension of *hic*, *hæc*, *hoc*, and of *idem*, *eadem*, *idem*, etc.

No class of professional men mispronounce the technical words of their calling more commonly than physicians. The chapter devoted to "Words Commonly Mispronounced" is worth the value of the work to any physician, whether possessed of a classical education or not.

Independent of the primary object of the work, as has been set forth, it contains a large amount of valuable historical information that will make it interesting to all. There are a very few errors; but they are of but little importance. The most important one we have noticed is on page 21, where it is stated that the two most distinguished Latin writers on medicine were Celsus and Pliny the Younger. Pliny the Younger was a distinguished lawyer. The only writings of his that have come down to our time is a small volume of letters to his friends. Pliny the Elder, the uncle of Pliny the Younger, was a most voluminous writer. He was a distinguished natural scientist, and wrote on botany, medicine, etc. His complete works on the natural sciences are extant. It would take nearly six months to read the translation of them, reading an hour a day.

Medical students will find it greatly to their advantage to study this work.

A Treatise on Dislocations. By Lewis A. Stimson, B.A., M.D., Professor of Clinical Surgery in the University of the City of New York; Surgeon to the New York, Presbyterian and Bellevue Hospitals, etc. With One Hundred and Sixty-three Illustrations. 8vo. Pp. 540. Leather. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, leather, $4; cloth, $3.

The first volume, containing 582 pages and 360 illustrations, was upon Fractures.

The appearance of this, the second volume, marks the completion of the author's original plan of preparing a work which should present, in the fullest manner, all that is known upon the cognate subjects of Fractures and Dislocations. The volume on *Fractures*, which appeared a few years since, assumed at once the position of authority on the subject, and its companion on *Dislocations*, which we have now on our table, will, no doubt, be similarly received. The plan of issue in two volumes, separately indexed, at the cost of one, places it within the power of all to obtain a convenient and authoritative work on these common and troublesome emergencies.

The interval of nearly five years between the publication of the volume on Fractures and the present one upon Dislocations is longer, the author states, than was anticipated; but the delay was due to the great amount of material that had to be corrected and examined in the preparation of the work. The labor that he performed in order that the volume upon Dislocations might fully set forth the knowledge that has been developed in this branch of surgery may truly be termed herculean. Authors usually, in their researches, limit their efforts to the literature that falls under their observation and the observation of their friends; but Dr. Stinson searched for titles through the "*Index Medicus*," the "Index Catalogue" of the Surgeon-General's Library, the encyclopedias, etc., and, thus guided, found whatever original articles that seemed likely to contain any new experience or observations of value. Periodicals, too, were examined for reports of cases, as also new text-books on surgery. Such most extended researches, of course, took time, and we are surprised that, having undertaken such a vast task, the author was able to complete in little less than five years.

Dr. Stimson, having thus sought original reports, and sub-

jected them to careful examination, has been able to correct many errors—some of them of long standing and wide circulation—which arose through reliance upon incomplete or faulty abstracts or reports, and others through faulty diagnoses, which have been corrected by the aid of post-mortem examinations or by critical review of the history in the light of later researches and accumulated evidence. The result of his extensive researches through such a vast mass of surgical literature, and his attentive study of it, is set forth in the volume just issued—the second volume of his work—and is at the service of the medical student and medical man.

The volume is divided into three parts. Part I is devoted to the consideration of Traumatic Dislocations; Part II to Non-Traumatic Dislocations; Part III to Special Dislocations. The last part, of course, forms a very large portion of the work.

From the brief history that we have set forth of the work, it will be perceived that the closing volume of Dr. Stimson's work on Fractures and Dislocations exhibits the surgery of dislocations as it is taught and practiced by the most eminent surgeons at the present time. Containing the results, as it does, of such extended researches, it must, for a long time, be regarded as an authority on all questions pertaining to dislocations. Every practitioner of surgery will feel it incumbent upon him to have it for constant reference.

THEINE IN THE TREATMENT OF NEURALGIA. Being a Physiological Contribution to the Therapeutics of Pain. By Thomas J. Mays, M.D., Professor of Diseases of the Chest in the Philadelphia Polyclinic; Member of the Philadelphia College of Physicians, etc. 12mo. Pp. 84. Cloth. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price, 50 cents.

The essay which constitutes this work appeared in the *Polyclinic* from September, 1887, to February, 1888. In order that it might have a more permanent form, it is published in a separate little volume.

What is theine? It is an alkaloid obtained from the leaves of the tea plant. The infusion of tea leaves has gladdened the hearts of our grandmothers for many years. Theine, however, was not separated until 1827, when Oudry

discovered it. This discovery was confirmed by Mülder and Golest in 1838, who believed it to be identical with caffeine and guaranine. It occurs in snow-white, needle-like crystals; is almost tasteless; but produces a slight tingling on the end of the tongue, which is immediately followed by a temporary local anesthesia.

The author states that in theine we possess an agent which has the power of paralyzing sensation without affecting motion, and that it does this with a great degree of certainty and without any appreciable injury to any part of the body, even when administered in large doses. "I have," says Dr. Mays, "on a large number of occasions, witnessed patients who had too much pain to move an arm, or who were too stiff to stand erect, swing their arms and straighten their bodies in less than five minutes after its introduction. It is not always so prompt; but this is probably due to the smallness of the dose." He recommends, if a single dose fails to act favorably, to increase, even if this has to be done to a large extent.

Theine is administered hypodermically in all the various forms of neuralgia, as sciatica, lumbago, intercostal neuralgia, dorsal or interscapular neuralgia, cervico-brachial neuralgia, occipital neuralgia, rheumatic neuralgia, spinal irritation, neurasthenia, etc. Under the head of each of these forms of neuralgia, the author reports numerous cases treated by him with theine with the happiest results.

Our readers can not do better with an odd fifty-cent piece than to purchase this little work. It contains a great deal of valuable information, besides giving full instructions in administering the new remedy known as theine.

Editorial.

THE AMERICAN MEDICAL ASSOCIATION.—Well, the thirty-ninth annual meeting of the *American Medical Association*, that we have been announcing for months in the MEDICAL NEWS would be held in Cincinnati, the Queen City of the West, has met and adjourned. And what a meeting it was! It was the largest, the most enjoyable and the most successful meeting the Association has held since its organization. We have not had an opportunity to consult the books, but it is stated on good authority that there were

present *two thousand delegates* and *one thousand* visitors. Was not that an immense number to be in attendance upon one meeting? They came from the far East and the near East; they came from the South, the Southeast and Southwest; they came from California, Kansas, Arkansas, Missouri; they came from the North, the Northeast and the extreme Northwest; they came from everywhere. What could have brought such vast numbers? In replying, we hope we may be excused if we seem to indulge a little vanity. We presume the widespread reputation Cincinnati has for hospitality made every one feel sure of having a good time, and then, the very central position of the Queen City, and the very many railroads centering to it, made it exceedingly easy of access from every part of this great country. Consequently, every doctor who could get away from home for two or three days, came. But very many did not come alone, but brought their wives, daughters, and, in not a few instances, the babies, too.

On Monday evening about fifty representatives of medical journals assembled in one of the parlors of the Burnet House, for the purpose of holding the annual meeting of the Medical Editors' Association. We noticed Dr. Wm. Porter, of the St. Louis *Medical Review;* also, Dr. Love, of St. Louis; Dr. N. S. Davis, of the *Journal,* of Chicago; Dr. Wile, of the *New England Medical Monthly*; Dr. Leonard, of Detroit, of Leonard's *Illustrated Medical Journal*; Dr. Brodie, Dr. Reynolds, the editor of *Progress*, of Louisville; the editor of the Peoria *Medical Journal*, and many others, not omitting the mention of Drs. Shoemaker and Dunglison.

Dr. Wm. Porter presided and delivered a very able address, which was greatly applauded. Among many good utterances was the following: "It has been charged that this Association is organized and conducted for purposes other than those of pure journalism. I need not use this time and place to refute this slander, but it gives me the opportunity of asserting that if to band together to promote those interests which are just and right and common to us all; to expose fraud in and out of the profession in the North or South; to insist that he who is worthy shall be esteemed, whether he comes from the far West or the distant East; to build up our local and State societies; to further the cause of our National Association; if to unitedly plan to keep these and kindred questions before the profession be a conspiracy, then are we to-night conspirators of

the deepest dye. I glory in such an alliance. Aye, make the circle stronger and larger, till it shall include all who have the oath of editorial knighthood upon their lips, and the kingly purpose of right in their hearts."

At eleven o'clock on Tuesday morning, the 8th inst., the *American Medical Association* was called to order in Music Hall by Dr. Wm. W. Dawson, chairman of the local Committee of Arrangements. The Mayor of Cincinnati, the Hon. Amor Smith, made a brief address of welcome. In his closing remarks he said that he had been told that when the Association met in Cincinnati twenty years ago, the then mayor issued an order to the police that should they hear laughter and noise in the streets at an unusually late hour of the night, they should pass on and not notice it, for they would know that it was caused by some of those rollicking doctors on their way home. He did not feel, he said, called upon to repeat his predecessor's order, yet he desired to offer the entire freedom of the city to his hearers, and if some of the younger members should happen to stay out a little late, some night, the members of the Association might be assured that they would have no cause to complain of the treatment which these joyous young men would receive.

Dr. C. G. Comegys delivered an address of welcome on the part of the medical profession of the city, which was well received. Among many topics touched upon was a description of the geological formation of the soil upon which Cincinnati was built. He told his audience that if they ascended the hills surrounding the city, they would see that they were made up of stratified sedimentary masses belonging to the Lower Silurian epoch. Between the layers are to be found large quantities of marine shells, showing that all the country about was once the bottom of a great body of salt water.

Dr. A. Y. P. Garnett, of Washington, D. C., delivered the President's address. It was certainly an address of great merit, and we regret exceedingly that we have not space to publish it entire. It should be printed in pamphlet form, and distributed to every member of the profession. It was chiefly devoted to medical education, and we have no doubt that it will do great good in the way of awakening the minds of many of the profession to the great faults that exist in the system of medical education in this country.

"In this country," said Dr. Garnett, "the multitude of

medical schools offering to the educated and the uneducated, by low fees and short terms of study, inducements to become doctors, together with the almost universal desire among laborers to become doctors, has worked incalculable mischief. We have waited almost a half-century for the desired reform to be effected, but our expectations have not been realized. Many excuses have been brought forward, but there is no excuse which will free the medical schools of this country from the responsibility of the odious defects of our system of medical education. The ratio of professional men in the United States, to the population, exceeds that of any other country of the civilized world. The ratio of practitioners to the population, at present, is about one to every 580; and there is little danger that it will be lessened.

"The half-educated artisan," continued the speaker, "ambitious of becoming a professional man, meeting with no obstacle in the way of preliminary education, throws aside his implements of trade, and walks into the halls of some medical school, to emerge therefrom, after two short courses of lectures, a full-fledged M.D., licensed to go forth as the accredited representative of a so-called learned profession. This, gentlemen, is no exaggerated picture, resting alone upon some isolated or exceptional instance, but a practical fact of frequent occurrence, and one for which the schools are directly responsible, since they alone have the power to correct the evil.

"Almost all institutions of learning that possess the authority to grant licenses, require preliminary examinations to determine the qualifications of students before accepting them as such, notably the two national academies of the United States—the army and navy. Why should not the medical schools, whose vast and comprehensive field of study more imperatively demands it, also require such examinations? The catalogues of many colleges state that certificates of educational acquirements are required of all students before matriculating; but I have the strongest grounds for believing that this rule is far more honored in the breach than in the observance.

"Again, it has been alleged, by way of explanation for the recognized and unfortunate educational deficiencies pervading many medical communities, that it proceeds from a lack of study on the part of the general practitioners, especially those residing in rural districts, who find more

congenial occupation in discussing politics, hunting and farming, than in the study of medical works; that the schools should not be held responsible for this condition of things. I would reply to this apology by asking if such members of the profession are, by reason of their surroundings, to lapse into this state of indifference and ignorance. Is it not the more important that they should, before completing a collegiate course and receiving a diploma, be required to lay a solid foundation of education, both academic and medical, that would stand by them through this rust of negligence and decay of interest, than to commence in ignorance, progress in ignorance, and, like unto the man to whom only one talent was given, go and hide that in the earth? No, gentlemen, there is no escape for the medical schools of this country from the responsibility of the obvious defects in our system of medical education, and the odium of a failure by them to reform that system must, like the shirt of Nessus, ever cling to them.

"That the professions of medicine and law are overcrowded in this country, no man of common observation will deny. The ratio of professional men in the United States to the population exceeds that of any other country in the civilized world, so that any legitimate means of checking this evil which can be devised and carried into practical effect, must be hailed by the medical world, as well as the general public, as an inestimable boon."

Dr. Garnett stated that the total number of medical schools in the United States are 126; of these, 95 are regular, 11 are eclectic, 13 are homeopathic, 3 are physio-medical, and four are too indefinite for accurate description. Of these, 2 regular, 1 eclectic, 1 physio-medical and 4 indefinite schools are not recognized by State Boards of Health, and by medical licensing boards.

For the purpose of promoting medical education and the qualifications of physicians generally, Dr. Garnett proposed that a standing committee be appointed for each State and Territory, to consist of five members of the medical profession, three of whom shall have no connection with any medical school, whose duty shall be to attend the sessions of their respective legislatures, from time to time, and employ all honorable means looking to the reduction of the number of medical colleges in the United States, and a consequent diminution in the annual number of medical graduates; that, as a measure to this end, they shall urge the passage of a

law requiring that in the future granting of charters for creating medical schools, there shall be a clause in every such charter requiring that all schools thus created shall demand a full term of four years' study before granting a diploma to any student thereof, and that no student shall be admitted to matriculate who has not passed a satisfactory examination, both oral and written, in the ordinary branches of academic study; and further, that any college failing to show a greater number than fifty matriculants annually for three consecutive years, shall forfeit its charter and be abolished.

2. That each committee use diligent effort that its State or Territory have a medical board of examiners, composed of seven competent and learned men of the medical profession, having no connection with any medical college, who shall be required to examine all applicants for license to practice medicine in its State or Territory; and that any person attempting to practice any branch of the healing art without license from said Board, shall be subjected to legal penalties.

The Doctor proposed that the faculties of the several medical colleges throughout the United States be called to hold a convention, at some central point, for the purpose of adopting some general and uniform system of medical education, more comprehensive and rigid in its requirements, and more in accord with the spirit of the age and the advanced progress of medical science. That any college declining to enter into such an arrangement as may be decided upon by said convention, shall be excluded from all connection with the *American Medical Association*, and its alumni not recognized as members of the regular profession.

DECEASE OF DR. C. S. MUSCROFT.—Since the last issue of the MEDICAL NEWS another eminent physician and surgeon of Cincinnati has ceased his labors and passed to another life; namely, Charles Sydney Muscroft, M.D., Sr. In the discharge of our duties in editing a medical journal for a quarter of a century, we have written the obituaries of the very large majority of the regular physicians of Cincinnati who were practicing at the time when we first entered upon our office. In fact, Dr. Muscroft, just previous to his decease, was one of only a very few left of those who had practiced medicine in the Queen City for twenty-five years and more.

It is difficult for us to regard Dr. Muscroft as dead, so full of life, and vigor, and anticipations was he when we met him but a few days before, what seems to us, his untimely taking off. There was no one whom death appeared so little meditating to strike; there was no one who seemed to have a surer lease upon life for many days. Notwithstanding this, however, he is dead—has joined the company of the "great majority." It is well said that "in the midst of life we are in death." No one can feel sure but that in a few hours a hearse will be drawn up at his door, to convey his body to its earthy bed, in which it will soon mingle with the ground around it. Is not the contemplation of such a fact most humiliating! What is there in this world to be proud of unless it be the consciousness of leaving behind a good name.

The Doctor was quite enthusiastic in anticipation of the meeting of the *American Medical Association* in Cincinnati. He had prepared a paper to read before the Surgical Section, in which he proposed to demonstrate some new methods of performing certain surgical operations, devised by himself, which he regarded to be of great value. None of the younger members of the profession labored with more zeal to insure that the meeting of the Association should be a successful one, and that the many delegates expected to be present should depart at the close impressed with the feeling that it was, in every respect, the very best meeting ever held since the organization. He was a member of one or more of the local committees that had been appointed by the profession of the city to prepare for the meeting of the Association, and he was most active in the discharge of every duty devolving upon him. He was not a man who ever waited to see if the hard work of a duty could not be put upon others to do; but always at once grappled with whatever was to be done. He died on Saturday, May 5th, at 2:30 P. M. At noon, on the same day, two hours and a half previous to his decease, he was at the office of Dr. Comegys, to consult him in regard to some arrangements in reference to the meeting of the Association.

Dr. Muscroft was born in Sheffield, England, on February 14, 1820. His father was a wealthy cutler of that place. It 1822 his parents came to this country. They traveled by wagon from Baltimore to Brownsville, Ind., and from there to Cincinnati. He was educated here, attending the best schools the city at the time afforded. At the age

of nineteen he studied medicine with Dr. Chas. L. Avery, and twelve years after he entered upon the general practice of medicine in Cincinnati. In 1855, having always had a fondness for surgery, he began to give special attention to the study of it, and since that time, to a large extent, has made a specialty of the practice of it.

In 1849, during an epidemic of cholera in Cincinnati, he was appointed Health Officer of the city, being the first man to hold that position in the city. On February 14, 1850, he married a daughter of Mr. Thomas Palmer, one of the founders of the Cincinnati *Daily Gazette*. By this marriage he had five children, only one of whom survives him, Dr. C. S. Muscroft, Jr.

Dr. Muscroft entered the army soon after the beginning of the recent Civil War, having received a commission from the Governor of the State of Ohio as Surgeon to the Tenth Ohio Infantry Volunteers. His regiment was first ordered to that part of Virginia which now forms West Virginia. He served with credit throughout the war. He served not only as Surgeon to the Tenth Ohio, but also as Brigade Surgeon, Medical Director and Inspector of Hospitals of the Army.

At the time of his decease Dr. Muscroft was President of the Board of Pension Examiners in this city. He was also chief of the surgical staff of St. Mary's Hospital, on Betts Street, having acted as such since 1865. For a number of years he was a member of the surgical staff of the Cincinnati Hospital, and was for five years a Director of Longview Lunatic Asylum. He has filled quite a number of responsible positions at various times, and, in all of them, he acquitted himself with great credit. He served a term as President of the Academy of Medicine of Cincinnati.

We knew him from the time we began the practice of medicine in Cincinnati, and always held him in the highest esteem as an upright, honorable gentleman and as a surgeon. He was a subscriber of the MEDICAL NEWS from its beginning, over twenty years ago, and frequently contributed to its pages. His contributions to surgical literature were valuable. He was not a prolific writer; but his articles were practical and contained much valuable matter. Whatever he wrote was prepared with care; but he always manifested more anxiety to clearly elucidate his views than to exhibit skill as a writer, although his articles were always

very well written. He kept himself well informed in the progress of his profession, and, though he was not as well posted in surgical literature as the late Dr. Geo. C. Blackman (we never met with a man who was), yet it would have been difficult to catch him napping in any effort to impose any old, exploded surgical views upon him as new, and as never having been heard of before.

A person so widely and favorably known as was Dr. Muscroft, in the community and in the profession, can not be soon forgotten. Certainly his memory will remain green for a long time. Though holding a high position, he was kind to all. He freely gave his labors to the poor and distressed without expectation of compensation. He actually died in the harness. A moment before he died he had prescribed for a patient in his office, after which he passed into an adjoining room, when he was heard to fall heavily upon the floor. The patient, on running to him, found him lying dead, his eyes being wide open. Physicians were immediately summoned, who pronounced the cause of death to have been paralysis of the heart.

A large meeting of physicians of the city was held in one of the lecture-rooms of the Medical College of Ohio, on Sunday afternoon, May 6th, to take action in regard to the decease of Dr. Muscroft. Dr. C. G. Comegys was chosen chairman, and Dr. J. H. Buckner was elected secretary. On motion, the following gentlemen were appointed a committee to prepare resolutions expressing the feelings of the meeting in regard to the loss sustained by the sudden death of Dr. Muscroft: Drs. Prendergast, Thacker, Dunham, Jones and Walker. After retiring the committee presented the following

RESOLUTIONS OF RESPECT:

"WHEREAS, Charles Sidney Muscroft, M. D., Sr., a member of the medical profession of Cincinnati, well known to all, has been suddenly, in the providence of God, removed from our midst; and

"WHEREAS, The profession, in the decease of Dr. Muscroft, has lost one of its most arduous workers—a man of truthfulness, kindness of heart, ever ready to assist the needy; therefore,

"*Resolved*, That in the decease of Dr. Muscroft the physicians of Cincinnati have lost one of their number who was most enthusiastically devoted to his profession—one whose

enthusiasm in the cultivation of medicine did not diminish as he increased in years; for, up to the day of his sudden death, he was actively employed in professional work, visiting the sick and writing papers to be read before medical societies and for publication in the medical journals, having prepared a paper to be read before the coming meeting of the American Medical Association.

"*Resolved*, Not only in medicine and surgery did he display interest, but he also diligently cultivated the natural sciences.

"*Resolved*, That a copy of these resolutions be transmitted to the family of the deceased, and be published in the medical journals of the city and in the daily papers.

"Signed, J. W. PRENDERGAST, M.D., Chairman.
"J. A. THACKER, M.D., Secretary.
"J. P. WALKER, M.D.,
"Geo. E. JONES, M.D.,
"W. H. DUNHAM, M.D.

"May 7th, 1888."

Dr. Muscroft was buried on the following Monday, from the Swedenborgian Church. The medical staff of St. Mary's Hospital held a meeting to take appropriate action on the death of Dr. Muscroft, who had been connected with the above institution for twenty-five years. A memorial tablet will be erected and placed within the Hospital, and Dr. Wenning is to furnish a biographical sketch, and a review of his services rendered to the above institution.

The members of the old Tenth Ohio Volunteer Infantry held a meeting, and it was resolved to attend the funeral in a body.

TEA.—We learn from the little work of Dr. Thos. J. Mays on "Theine" that tea was used as a beverage from a very early period in Chinese history; but the Greeks and Romans were ignorant of its existence. It was not introduced into Europe until about the year 1657.

For a number of years we have been acquainted with caffein, and have prescribed it in the form of bromide of caffein or bromo-caffein; but, really, we were not aware that druggists regarded *caffein* and *theine* as identical; but Dr. Mays says that since 1885 he learned that theine, caffein and guaranine were manufactured indiscriminately from coffee, tea, kola nut, Paraguay tea and guarana, and

were sold out of the same bottle, and labeled according to the demands of the trade. He says that on inquiry it was demonstrated very positively that nearly all of that which is sold under the name of caffein at present is not caffein at all, but theine, since it happens that it is cheaper to manufacture the alkaloid out of tea leaves than from any other raw materials. Further, he found that very little, if any, theine or caffein is manufactured in this country, and that they are principally imported from Europe.

Although tea and coffee, as beverages, are both stimulants, yet it is generally agreed that their *gross* effects are dissimilar. Chemists assert, we believe, that caffein and theine are alike chemically, and, on that account, it is probable that the assumption followed that their physiological action was the same. But this was an error, for Dr. Mays states that while theine produces convulsions in frogs, caffein does not. The Doctor has also found, by his own experiments, that theine principally affects sensation, while caffein does not; theine produces spontaneous spasms and convulsions, while caffein does not until very late in the stage of poisoning; theine impairs the nasal reflex early in the poisoning process, while caffein does not, if at all, until the very late stage. The lethal dose of theine is larger than that of caffein.

Dr. A. Y. P. Garnett.—Dr. Garnett, who was the President of the American Medical Association just held in Cincinnati, and who impressed every one who met him as a highly cultured gentleman, was, during the "late unpleasantness" that existed between the North and the South, the chief of the entire medical service of the Southern Confederacy, and was the family physician of President Jefferson Davis, General Lee, Joe Johnston, Breckinridge, and, in fact, of nearly every member of the Confederate Cabinet.

The *Hearald and Presbyter*, the organ of the Presbyterian Church of the West, seems to think that it would be a desirable condition if there existed, among the religious organizations of this country, a feeling of no North and no South, as prevailed in the late meeting of the American Medical Association.

Election of Officers of the American Medical Association.—The Committee on Nominations advised the

election of the following gentlemen as officers of the Association: President, Wm. W. Dawson, of Cincinnati, O.; First Vice-President, W. L. Schenck, Kansas; Second Vice-President, Frank Woodbury, Pennsylvania; Third Vice-President, H. O. Walker, Michigan; Fourth Vice-President, J. W. Bailey, Georgia; Treasurer, R. J. Dunglison, Pennsylvania; Secretary, W. B. Atkinson, Pennsylvania; Librarian, C. H. Kleinschmidt, District Columbia. They were all unanimously elected.

The profession of Cincinnati are greatly pleased by the selection of Dr. W. W. Dawson as the next President of the Association. The Committee did great credit to themselves by reporting his nomination. The next meeting of the Association will be held at Newport, Rhode Island.

ERRORS IN PRONUNCIATION.—It is astonishing how greatly physicians are given to mispronounce medical terms—the names of diseases and of medicines, chemical expressions, physiological and pathological terms, etc. Even many medical men who, on account of the high position they occupy in the profession, are regarded by laymen as educated, cultivated physicians, who would be disposed to pronounce correctly the words peculiar to the various departments, oftentimes make use of very erroneous pronunciation. The late distinguished Prof. L. N. Lawson, who for many years held the Chair of Practice in the Medical College of Ohio, was the only physician we ever knew to be exceedingly careful in using a correct pronunciation.

Four physicians out of five pronounce PHTHISIS *tee-sis*, and not *ti-sis*, as they should. Almost ninety-nine in a hundred, in pronouncing RUBEOLA (measles), place the accent on the third syllable, instead of the second. SALINE should be pronounced with the accent on the second syllable, with the "i" long, and not as if spelled *salene*, with the accent on the first syllable, as is generally. RIGOR should be pronounced ri-gor, accent first syllable, and not rig-or. RABIES should be pronounced ra-bi-ez, accent first syllable, and not rab-i-ez. RADIX, ra-dix, not rad-ix. We could continue mentioning mispronunciations of the commonest words in medicine, to the number of several hundred, but we have not the space. Really, we think physicians should endeavor to cultivate a correct pronunciation.

But, to proceed to another class of errors: How very many physicians suggest to their patients, in the way of accounting

for some malady, that they have contracted "a bad cold," instead of a severe cold. Did any one ever hear of a *good cold?*

For the purpose of correcting erroneous pronunciation, consult Campbell's "Language of Medicine;" errors of expressions, consult "Slips of the Tongue," by J. H. Lang.

Banquets and Entertainments.—An informal reception was held on the first evening of the meeting of the American Medical Association in Cincinnati, at the Burnet House. There were present not less than 1,500 persons, composed of delegates and their wives, and visitors. There were good instrumental music, and very fine viands, which all enjoyed very much.

On the second evening, Wednesday, there was an entertainment given at the Art Museum, by the profession of the city, in honor of the Association. The number in attendance was estimated at not less than three thousand. The whole building, from the lowest to the highest story, was filled with ladies and gentlemen. All were filled with admiration of the splendid collection of specimens of art contained in the Museum, which will compare favorably with those found in many of the most celebrated collections of Europe.

On Thursday evening a grand musical entertainment was given at Music Hall. The Hall has a capacity for seven thousand people, and it was filled. There was orchestral music by the Cincinnati Orchestra, singing by the Apollo Club, composed of young gentlemen, singing of solos by Mrs. Lawson, organ music by the grand organ.

The Association passed the following resolution before adjourning:

"*Resolved*, That the heartfelt acknowledgment of this meeting be tendered to the physicians of this city, to the Apollo Club, and to all who have contributed toward the great success of this session; and especially are our thanks due, and we take pleasure in this manner to express them, to the rare coterie of ladies who have given brilliancy to the social entertainments by their charming presence. They are the best jewels in the crown of this metropolis, which is destined to be the Queen City of the East, as well as of the West."

Among many old friends we noticed in attendance upon the meeting of the Association, was Dr. D. J. Snyder, of Scio, O.

DEATH OF DR. EMIL BESSELS.—This well-known physician, naturalist and Arctic explorer, died March 30th, at the early age of forty years, of heart failure, at Charfreitag, Stuttgardt. He was known in scientific circles in this country, having come to America in 1871 to undertake the scientific direction of the North Pole expedition under Hall, of *Cincinnati*, on the Polaris. He wrote the "Physical Observations" of the narrative of the voyage of the Polaris. He was appointed Secretary of the Smithsonian Institution at Washington in 1876, and held the position until 1885, when, his house burning, and coming near losing his life, he returned to Europe and settled at Stuttgardt, where he remained until his death recently.

THE CENTENNIAL EXPOSITION.—The worthy Mayor of this city, in his address of welcome to the American Medical Association, called the attention of the members to the fact that active preparations were being made to hold a *Grand Centennial Exposition* in Cincinnati, beginning July 4th, and continuing one hundred days. He expressed the hope that they would all visit the Exposition during its progress, promising them that they would be well repaid. He requested them to inspect the immense buildings, which they would see had already been erected—buildings of such great capacity that their very size was a guarantee that the Exposition would be of immense proportions.

We join in the wish of the Mayor that the numerous delegates and visitors to the Association, and all the friends they left at home, will be in Cincinnati during the time of the Grand Centennial Exposition, and attend it. We can assure them that it will well repay them. There will be a grand display of art, natural history, etc., and of specimens in all the departments of natural science. Let all come and see.

REASONABLY LARGE.—The editor of the *Medical Record*, New York, in speaking of the attendance upon the American Medical Association, in its issue of May 12, says that it was "reasonably large." If he had only been present himself, and witnessed the vast concourse of physicians from every part of the United States, we think he would have concluded that the attendance was *very large*. We fear that he has not gotten altogether reconciled to the action of the American Medical Association on certain matters of the past.

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Original Contributions.

Should not the National Government Defend Our Ports against the National Enemy—Contagious Disease?

BY BENJAMIN LEE, A.M., M.D., PH.D., OF PHILADELPHIA, SECRETARY OF THE STATE BOARD OF HEALTH OF PENNSYLVANIA.

Read before the Section on State Medicine, of the American Medical Association. Revised by the author for the CINCINNATI MEDICAL NEWS.

To ask this question ought to be to answer it. To one who views it from the broad standpoint of humanitarian nationalism, it would seem that there can be but one response, and that an affirmative one. The only argument which has been adduced against it is that the power of enforcing quarantine is a police power, and as such, reserved by the Constitution to the several sovereign States. I confess myself unable to find any such reservation. On the contrary, Section 8 of Article I. declares that "Congress shall have power to provide," not only "for the common defense," but for the "general welfare of the United States; to regulate commerce with foreign nations," and "to make all laws which shall be necessary and proper for carrying into execution the foregoing powers, and all other powers vested by this Constitution in the Government of the United States, or in any department or officer thereof." More than this, the several States are expressly forbidden to "enter into any agreement or compact with a foreign power." Now, I am quite willing to grant that the enemies against which a "common defense" is thus guaranteed, are the armies and navies of foreign nations, and not bacilli or cryptogams, although, in a more highly advanced state of civilization, a

liberal interpretation might even admit these latter more formidable foes. But I ask:

First—What possible interest is there which more nearly concerns "the general welfare" than the protection of the entire nation from the introduction of pestilence from abroad?

Secondly—How is it possible to administer quarantine regulations without, to a greater or less extent, often to a very serious extent, interfering with the "commerce with foreign nations," from which the States are expressly bidden to keep hands off? and

Thirdly—In what way can such a reciprocal understanding be arrived at between the government of any State, still less of any city, and foreign governments, as the rapidity and immensity of modern intercommunication makes absolutely essential, if the transportation of contagions is to be brought under control, when the said State and municipal governments are forbidden, in so many words, "to enter into any agreement or compact with a foreign power"?

Internal hygiene, the making of all laws which shall promote health, protect life and prevent the transportation of contagion within the limits of each State—this certainly is a right reserved to each State by exclusion. But when it comes to the question of common defense against a common enemy from without, which, more persistently and terribly than any other, threatens the "general welfare," an appeal to the Constitution appears, both by analogy and by literal construction—by the letter as well as by the spirit—to lead to but one conclusion: that this latter power inheres in the General Government.

This question has, however, been practically decided by Congress in placing a fund at the disposal of the President, to be used at his discretion, in taking measures to prevent the introduction of contagious diseases in especial emergencies, and in assigning to a subordinate bureau of the Treasury Department the duty of establishing quarantine stations at certain points, under certain conditions, and of requiring the consular representatives of the nation to report the progress of contagious diseases in foreign countries to that bureau.

We may, therefore, consider that objection as finally tabled, and proceed to discuss the question whether the National Government, having the right to assume control in this matter, is not in duty bound to exercise it. In con-

sidering this subject, I shall not scruple to avail myself of the admirable work already done, contained in the following papers, viz.: "Practical Recommendations for the Exclusion and Prevention of Asiatic Cholera," an address delivered by Dr. John H. Rauch, Secretary Illinois State Board of Health, before the National Conference of State Boards of Health, at St. Louis, in October, 1884; "Coast Defenses against Asiatic Cholera," a report of an inspection of the Atlantic and Gulf Quarantines, between the St. Lawrence and the Rio Grande; "Report of the Committee of the College of Physicians of Philadelphia, Appointed to Investigate the Efficiency of Our Quarantine Arrangements for the Exclusion of Cholera and other Epidemic Diseases;" an editorial article from the *Medical News* of Philadelphia, November 5, 1887; an address from a special committee of the College of Physicians of Philadelphia, to the medical societies of the United States, concerning the dangers to which the country is exposed by the ineffectual methods of quarantine at its ports, and in regard to the necessity of national control of maritime quarantine; "Report of the Committee on Epidemic Diseases", of the Senate of the United States.

If it should be found on investigation that, under the system which leaves the management of quarantines to local authorities, whether State or civic, every quarantine station has been generally supplied with everything necessary, in the way of extensive grounds, so situated as to make isolation easy and complete; of commodious buildings for the reception, detention and observation of suspects, and well-arranged and ample hospitals for the treatment of the sick; of establishments and apparatus for the complete and rapid disinfection of both effects and vessels, we might conclude, simply from a sanitary standpoint, that Federal interference was uncalled for. If, on the other hand, we find that, except possibly in a single instance, not one of these conditions has been discovered to exist, we are forced to the conclusion that neglect of this duty on the part of the Government is longer inexcusable; and if, moreover, we find that in the mature opinion of some of the ablest sanitarians and physicians in the country, it is impossible, from the very nature of things, that these favorable conditions could invariably be presented under State and local management, such neglect becomes a folly and a crime. In reference to this last point Dr. Rauch says: "Under the

National Health Organization there should be extended and perfected: Third, The system of refuge stations projected by the National Board of Health. With two or three exceptions, no port in the United States has adequate facilities for the proper administration of quarantine. Such a system as was inaugurated by the National Board of Health, and which is the only quarantine contemplated in these remarks, involves the removal of an infected or suspected vessel out of the track of commerce; the segregation of her sick from the well, the proper care and shelter of both these classes; the necessary disinfection of infected cargo, and the purification of the vessel, and the release of vessel, cargo and persons so soon as they have been rendered safe and free from the danger of communicating disease.

"This is very different from a mere quarantine of detention. It is the American quarantine of sanitation, a common-sense quarantine, which aims to prevent the introduction and extension of contagion, not by merely arresting it at a given point, and there leaving sick and well at its mercy until, the susceptible material having become exhausted, no more cases of the given disease occur, but by removing the susceptible at once from its influence, and then destroying it and the conditions necessary for its existence, by scientific methods of disinfection and purification.

"To do this, however, requires a quarantine plant and facilities far beyond the means of any but the largest ports, supported either by abundant quarantine fees or by adequate appropriations from the State or municipality. But cholera may obtain access at a small port as well as a large one, and hence the necessity for the refuge stations above indicated."

And later, in the same address: "Sooner or later, the National Government will be compelled, not only to assume supervision of exterior quarantine, but to provide for a permanent system of coöperation with State and local governments in the administration of inter-State sanitation; in order, on the one hand, to prevent the introduction of exotic epidemic diseases, and on the other hand, to prevent their spread from State to State, along the great international highways of travel and commerce. This is a national duty. It is one that the National Government only can adequately discharge, and its expense is, equitably, one which should be defrayed from the National Treasury."

The report of Dr. Rauch's tour of inspection is already a classic. It goes without saying that while he found much

to commend in the devoted and painstaking attention of individual officers to quarantine duties, he discovered, with very few exceptions, an almost entire absence of all the essentials of a thoroughly-equipped quarantine station. Commenting upon this he says:

"During all this time, from the earliest date to the present, the control of quarantine has remained entirely under the jurisdiction of State and local authorities, except during the brief period in which the National Board of Health exercised its limited quarantine powers, under the act of 1878, and which expired in 1882. It is this absence of adequate national health authority and legislation, and the fact that in such absence the Maritime Quarantines are controlled and administered by State and local authorities—resulting in diverse and frequently conflicting regulations and requirements, and of necessity, in a tendency to limit precautions to their own individual interest, commercial as well as sanitary—which throw upon interior States the responsibility of fully informing themselves of the strength or weakness of these outposts, in order to know where to anticipate danger, and how to make their own preparations to meet it.

"At its last session Congress appointed a commission to examine and report upon the measures necessary for the defense of our seacoast against a foreign armed enemy, and a distinguished publicist and statesman, Mr. Tilden, has recently urged this as a parmaount duty of the Government. Millions of dollars have already been expended for such defense, and millions more will probably be forthcoming to meet this possible contingency. But the assaults of foreign contagion are not a contingency. They are actual events, and during the past twenty years they have cost the country an aggregate loss of life only less than that of the great war immediately preceding. Every sanitarian, and many of our leading statesmen, know that this actual and ever-recurring loss is wholly and entirely preventable by the expenditure of a sum which sinks into utter insignificance before the millions which will be appropriated for the protection of our coasts against possible future danger.

"But thus far, neither sanitarian nor statesman has been able to overcome the petty jealousies of individuals, communities, and of States themselves, so as to secure the legislation necessary to remedy even the present confusion."

Early last autumn two or more cholera-infected ships lay in New York Harbor, while the disease was spreading with con-

siderable rapidity among the passengers who had been disembarked upon Hoffman's Island for observation. Impressed with the gravity of the situation, the College of Physicians of Philadelphia, one of the most venerable and least aggressive of American medical societies, on the 5th of October appointed a committee "to consider the present danger of the importation of cholera into this country, and to secure concerted action among the medical societies in the land in urging upon the state and national authorities the adoption of a uniform and efficient system of quarantine for all exposed ports." This committee, consisting of Drs. J. C. Wilson, Chairman; E. O. Shakespeare, late United States Cholera Commissioner to Europe, and Dr. R. A. Cleeman, late member of the Philadelphia Board of Health, did its work thoroughly and well, and reported its results fearlessly and impartially.

It took up two main questions:

I. What are the requirements of an efficient quarantine against cholera?

II. To what extent do the existing arrangements at the ports of New York, Philadelphia and Baltimore fulfill these requirements?

Their reply to the first of these questions, taken from an editorial in the MEDICAL NEWS of October 15, sums up these requirements so completely and concisely that I make no apology for reproducing it in full:

"Measures of prevention, to give the greatest possible guarantee of success in extinguishing an incipient epidemic of cholera, should, in the first place, be based upon the most exact knowledge we possess of the cause, mode of attack and manner of spread of the disease; and in the second place, these measures should be intelligently, thoroughly and rigidly enforced.

"What are the considerations involved in the first category? Probably nine-tenths of intelligent and experienced physicians all over the world, even including those of India, have for years admitted that there is most convincing proof that the active cause of the disease is a specific, material, living entity, of extremely minute size, endowed with the power of self-propagation, and of exceedingly rapid multiplication in enormous numbers; that among animals, it naturally attacks man alone, assailing him only by way of the intestinal canal; that the evacuations from the bowels contain the active cause of the disease, and that, when this

agent in any manner—as through drinking water, milk, food, or the handling or washing of contaminated personal effects, etc.—reaches the intestines of another susceptible person, the disease may be thereby transmitted from the sick to the healthy; that the active agent exists in the dejecta of the lightest and most imperceptible no less than the severest and most deadly forms of the disease, and is known to be transportable from place to place through the movements of man and his personal effects.

"Proceeding from this basis, logical deduction and common experience alike demonstrate the absolute necessity and efficiency of such measures of prevention as the following:

"*a.* Speedy recognition and isolation of the sick; their proper treatment; absolute and rapid destruction of the infectious agent of the disease, not only in the dejecta and vomit, but also in clothing, bedding, and in or upon whatever else it finds a resting-place.

"*b.* The convalescents should remain isolated from the healthy so long as their stools possibly contain any of the infecting agent; before mingling again with the well, they should be immersed in a disinfecting bath, and afterward be clothed from the skin outward with perfectly clean vestments, which can not possibly contain any of the infectious material.

"*c.* The dead should be well wrapped in cloth thoroughly saturated in a solution of corrosive sublimate, 1 to 500, and without delay, cortegé or lengthy ceremonial, buried near the place of death, in a deep grave, remote as possible from water which may, under any circumstances, be used for drinking, washing, culinary or other domestic purposes. (Cremation, of course, is by far the safest way of disposing of cholera cadavers.)

"*d.* Those handling the sick or the dead should be careful to disinfect their hands and soiled clothing at once, and especially before touching articles of food, drinking or culinary vessels.

"*e.* In the case of Maritime Quarantine, the well should be disembarked and placed under observation in quarters spacious enough to avoid crowding, and so well appointed and furnished that none will suffer real hardships.

"*f.* Once having reached the station, those under observation should be separated in groups of not more than twelve to twenty-four, and the various groups should, under no pretext, intermingle; the quarters for each group should

afford stationary lavatories and water-closets in perfect working condition, adequate to the needs of the individuals constituting the group, and supplied with proper means of disinfection; there should be a bed raised above the floor, proper coverings, and a chair for each member of the group, each person being required to use only his own bed; there should be a common table of sufficient size to seat around it all the members of the group, who should be served their meals from a central kitchen, and with table furniture belonging to the station and cleaned by the common kitchen scullions.

"*g.* Drinking-water, free from possible contamination and of the best quality, should be distributed in the quarters of each group, as it is needed, and in such a manner that it is received in drinking-cups only; there should be no water buckets or other large vessels in which handkerchiefs, small vestments, children's diapers, etc., can be washed by the members of any group.

"*h.* Immediately after being separated into groups in their respective quarters, every person under observation should be obliged to strip and get into a bath (a disinfecting one is preferable), and afterward be clothed with fresh, clean vestments from the skin outward. Every article of clothing previously worn should be taken away and properly disinfected.

"*i.* Then all of the personal effects should be at once removed to a separate building, washed—if possible—and thoroughly disinfected, or, if necessary, destroyed. After disinfection, they should be temporarily returned to the members of the group, when occasion requires a further change of clothing.

"*k.* Under no circumstances whatever should washing of clothing by those under observation be permitted. All used clothing should be first thoroughly disinfected (by boiling, when possible), and then should be cleansed, the disinfection and washing being done by a sufficiently-trained and absolutely reliable corps of employes supplied with adequate appliances.

"*l.* All of those under observation should be mustered in their own quarters and be subjected to a close medical inspection, *while on their feet*, at least twice every day, in order to discover and isolate, as soon as possible, new cases which may develop, and, of course, the clothing and bedding of these new cases should be treated without delay, in the

manner already mentioned. In the meantime, a watch should be set over the water-closets, for the purpose of discovering cases of diarrhea, and, when discovered, such cases should be temporarily separated from the rest; they should receive judicial medical attention at once, and precautions should be taken as if they were undoubted but mild cases of cholera.

"*m.* The quarters should be kept perfectly clean, and every surface upon which infectious material could possibly be deposited, including floors, should be washed with a strong disinfectant twice daily, and oftener, when necessary; evacuations from the bowels should be passed into a strong disinfectant, the hopper of the closet should be then flushed, and finally drenched with a quantity of the same disinfectant.

"*n.* For the proper attention of the sick, there should be two or more competent and experienced physicians, assisted by a sufficient corps of intelligent and efficient nurses, with hours of duty so arranged that a physician with a sufficient number of nurses can be in constant attendance in the wards of the hospital.

"*o.* For the prompt recognition and separation of new cases, their temporary medical attention, the proper treatment of discovered cases of diarrhea or cholerine, and of other maladies, and the immediate correction of every insanitary practice or condition by constant, vigilant and intelligent supervision, there should be at least two or more competent and experienced physicians, with hours of service so arranged that a physician is on duty night and day, among those under observation, and he should have, subject to his orders at any and every moment, a sufficient and efficient corps of nurses and laborers to carry out properly and promptly his directions.

"*p.* In order to prevent the intermingling of the various groups, to enforce obedience and order, and to make it absolutely impossible for the quarantines and their personal effects to have any communication with the exterior, a well-organized and sufficiently large police corps should patrol the borders of the stations and the buildings day and night.

"*q.* Any group among whom there has developed no new cases of cholera, or of choleraic diarrhea, during the preceding eight or ten days, may be regarded as harmless, and allowed to leave quarantine after each one is finally immersed in a disinfecting bath, and reclothed with clean garments

from the skin outward; the garments removed being destroyed, or thoroughly disinfected and cleansed as above indicated.

"As yet, no reference has been made to the crew, ship and cargo. What has been said of the treatment of those under observation, applies to every one of the ship's inhabitants. The observation, isolation and cleansing of the crew and their effects, could safely be performed aboard ship, if necessary. The ship should be thoroughly cleansed and disinfected, particular attention being given to the quarters of the emigrants and crew."

In regard to the second, it must be observed that it refers to the three most important ports of entry of the Middle States, if not of the country, and to those which are in most immediate and constant communication with the whole grand interior chain of lines of travel and traffic. And, while I can not accept the conclusion that "there is no reason to believe that the conditions of other ports of entry upon our Atlantic and Gulf Coasts are in any respect superior," yet it must be admitted that the possible exceptions to this sweeping condemnation are extremely few. Passing over the minutæ of the report of these inspections, which should be carefully read by every practical sanitarian, I make a few extracts from the general conclusions arrived at:

"It is evident that the quarantine establishments at Philadelphia and at Baltimore fail in the most essential requisites of the necessary number of properly equipped buildings for the isolation and observation of a large number of immigrants."

This is all the Committee say with regard to these reports. Could condemnation be more utter and complete? Its very brevity is appalling. Its language is very nearly that of a letter addressed by the speaker to the Board of Health of Philadelphia, a short time previous, which says: "Permit me, however, at the risk of seeming pertinacity, again to call your attention to the *entire inadequacy of the provisions made by the State authorities* for coping with a similar emergency in our port." They "are those of nearly a century ago, when the present metropolis of Pennsylvania was but a country town. What might have been the consequence of her teeming population had the ship 'Alesia' ascended the Delaware River to Chester, instead of anchoring off Sandy Hook, it is not pleasant to contemplate." New York, however, had a plant of sufficient dimensions to make it and its

administration worthy of notice in detail. But so insufficient were the precautions, and so defective the provisions there found, that the Committee felt compelled to record their verdict that:

"It would seem that if the importation of immigrants directly from a European port notoriously infected, is not to be temporarily prohibited as a necessity of public safety, or if the treatment of these immigrants, after their arrival at the New York Quarantine Station, is not to be immediately and radically improved, our protection against an epidemic at the present time must rest mainly upon the fortunate circumstance of the near approach of a season in which the disease does not usually spread. The continuance of cholera among the passengers of the 'Alesia' so long after their removal to the station of observation, in itself demonstrates the inefficiency of the measures which have been adopted and enforced for its extinguishment there. Although we have not yet heard of the development of the disease anywhere on the mainland, nevertheless, in view of the almost uncontrollable tendency of cholera to spread, at times, and of the original insufficiency and the present faulty constitution of the police force on Hoffman Island, we feel impelled to believe that the immunity, up to the present time, has been owing to singular good fortune, rather than good management."

The report concludes nearly as follows: "It is natural, after having made our comments on the defects of the quarantine stations we have described, that we should endeavor to point out their causes and probable remedy. There is one cause so prominent that we may dwell on that alone. It is the great expense. Were it not for the question of money, there would have been physicians constantly in attendance at the New York station, and consequently, better management and discipline would have been maintained; while at Philadelphia and Baltimore there would have been adequate establishments provided for the isolation and observation of large bodies of immigrants.

"Municipalities and States are wont to scrutinize every dollar of their money appropriations, bringing their expenses down to the closest living limit. Quarantine in this country being, as a rule, enforced, mainly against yellow fever and smallpox, a mistaken economy has caused no provision to be made for the more perfect establishments absolutely required for protection against cholera.

"Philadelphia, Baltimore, and other ports of a more limited

commerce, are unable to spend as much on their stations as is New York, with its large revenues from that source, yet an inefficient quarantine at any station exposes the whole country to the dangers of the importation of disease. But it is manifestly unfair that a single municipality or State should defray the expense of protecting the whole public.

"How, then, can we have equally complete stations all along the coast? We believe that this can be effected by putting quarantine into the hands of the National Government."

Continuing its valuable labors, the Committee proceeded to draw up "An Address to the Medical Societies of the United States, concerning the dangers to which the country is exposed by the ineffectual methods of quarantine at its ports, and in regard to the necessity of national control of maritime quarantine." This address is based upon the combined results of Dr. Rauch's investigations and its own, and it aptly calls attention to the fact that an "inspection made during seasons of comparative quarantine inactivity" must of necessity be inadequate and misleading, and calculated to foster a false sense of security. Under the pressure of the emergency of a present contagion and thousands of suspects, glaring deficiencies instantly manifest themselves which were before unthought of. The general propositions submitted in the address, as a result of the consideration of existing conditions, are as follows:

First—"It is impossible adequately to protect the public health of the country against the importation of epidemic diseases by independent local maritime quarantine establishments."

Second—"A national system of quarantine is necessary."

Third—"A national organization would secure advantages not attainable by independent local quarantine establishments, however complete."

Among the subsidiary statements with which they reinforce these theses, I note the following:

"There is always great difficulty in obtaining sufficient appropriations of public money to defray the expenses of the necessary quarantine establishments and their proper maintenance. It is only possible, during periods of threatened invasion, to procure the considerable sums of money necessary for these purposes; whilst in the interim the money expended is greatly inadequate, though large sums are constantly needed. When the invader is at our gates, it is

often impossible to plan, construct or repair and properly equip and garrison an efficient line of defenses.

"Rival political and commercial interests are inimical to the perfect protection of the general public by independent and local quarantine.

"It is but natural that municipal organizations should, in looking after their own interests, pay little regard to the welfare of distant communities.

"In this connection may be noted the indisposition and failure on the part of local quarantine officers to notify the authorities interested of the arrival of emigrants from infected localities. Notwithstanding the frequent paramount interest of inland communities in the efficiency of the establishment and administration of quarantine at the seaboard, the local authorities of the latter frequently evince an unreasonable jealousy of any sort of investigation or suggestion looking to the general welfare.

"The benefits of quarantine inure to the welfare of the whole country; therefore, it is just that money should be as freely expended, when necessary, at one port as at another, without respect to their relative commercial importance. It is manifestly unfair that the seaboard cities and States should, as at present, be obliged to bear the entire expense of quarantine establishments designed to protect the inhabitants of every region of the vast territory of the United States.

"A national quarantine, properly administered and conducted by trained officials, accustomed to deal with contagious and infectious diseases, would tend to prevent panic, to allay undue anxiety, and to favor a reasonable sense of security.

"Experience has shown that much needless alarm, as well as preventable danger, arises upon the appearance of an unfamiliar epidemic disease at quarantine stations; as when cholera has shown itself at New Orleans or New York, or yellow fever at Philadelphia or Boston. A national quarantine would go far to do away with the necessity for vexatious temporary inter-state quarantines, which so seriously disturb inland trade.

"A national quarantine system, directed in such a manner as fully to meet the requirements of existing sanitary knowledge, would not adversely disturb any commercial interest. It would, on the contrary, do away with many of the embarrassments incident to maladministration of existing local

regulations. For example, the healthy passengers of the Italian steamship 'Alesia' were detained at quarantine in New York Harbor for a period of fifty-eight days; while, under an efficient system, uninfluenced by needless fears, those of them who were free from disease could have been safely liberated in ten days, at the furthest."

The Committee thus sums up its conclusions:

"SUMMARY.—Under the present system of local and independent maritime quarantine, the necessary quarters for the detention of large numbers of immigrants arriving in a suspected vessel, are either entirely wanting, or, if at hand, are deficient in equipment or administration, or both. It is possible, however, that one port, well-governed and rich from prosperous commerce, may make up these deficiencies; yet what would this avail, even to that community itself, if a neighboring port, only a few hours distant by rail, failed to exclude epidemic diseases. The front door might be doubly barred and bolted, but the enemy would find an easy passage through the defenseless rear. As recent examples thereof, may be instanced the danger of an epidemic of yellow fever, to which the little town of Biloxi, in Mississippi, exposed, in 1886, not only the interior States, but even the city of New Orleans itself, now apparently so well protected by her own system of maritime quarantine; and that to which, in 1887, the defenseless condition of the small port of Tampa, in Florida, exposed not only that State, but others.

"This want of uniformity in the quarantine defenses along our coast must necessarily exist, when different authorities supply the money for maintaining the several stations, and the purse of one port is longer than that of its neighbor. Another money difficulty is found when the appropriation for the same station comes, as it may, from the coffers of both city and State; possible difference of opinion in the municipal council and the State Legislature is likely to endanger the sufficiency or change the direction of the funds to be expended. In any case, the danger to a single port of entry, or even to a single State, is by no means the same as that which threatens the country at large, and communities are not likely to make a larger expenditure than is needed for their own defense. As an illustration of a difference in the conditions of danger which may exist between the port of entry and the interior of the country, may be mentioned the passage of immigrants with infected baggage. The immigrants may come from a healthy port, and in a healthy

ship, and with the poison securely imprisoned in their baggage, will pass through the port of entry with perfect safety to its inhabitants; the danger will begin in that far interior where the baggage is opened. It is of no interest to that port to have the baggage disinfected, and it is carried on to some uncertain place, unhindered, to do its fatal work. And here may be pointed out the rather peculiar position in which America finds itself, in attracting to its shores hordes of immigrants from the older countries. There is in municipalities little disposition to spend more, even, than is called for to satisfy immediate wants; remote necessities are seldom provided for. A quarantine that is not always in use, is not always ready for use. It is only when danger is at its gates, and when, perhaps, it is too late for protection, that a city wakes up to its defenseless state. Municipalities are selfish, and, knowing that with the trader, quarantine is not a favorable institution, and that it is his tendency to sail into that port where the quarantine is most lax, they are assailed with a sore temptation to wink at the neglect of proper precautions, if, by so doing, they may circumvent a possible commercial rival."

In the opinion of the Committee, the difficulties mentioned can only be overcome by the adoption of a maritime quarantine under the control of the National Government.

Commenting upon this report, in its issue of November 5, 1887, the *Medical News*, of Philadelphia, pertinently says:

"As the testimony of thoroughly competent and independent observers, a Committee of one of the most conservative and respected medical bodies in America, it carries with it the weight of conviction, and conclusively proves the urgent necessity of radical reform in our method of guarding the country against devastating epidemics with which we are, through foreign communications, from time to time threatened.

"Should the germs of cholera finally escape, or be permitted to pass beyond quarantine, they may not limit their onslaught to the nearest city, but may spread over the land and ultimately carry sorrow and loss to homes hundreds, and even thousands, of miles distant from the port where they entered.

"The abuses and the faults of an exclusively local quarantine, such as at present exists, are so natural and intrinsic that we should by this time acknowledge the absolute need

of a national protection of the general welfare by a national maintenance and administration of quarantine."

Meantime, the entire country appears to be waking up to a sense of the urgent need for immediate and definite action in the direction indicated. The Senate Committee "on Epidemic Diseases, in Relation to Seaboard Quarantines," has had under consideration, during the present session, the following bills, resolutions and memorials:

"Senate Bill 665.—To establish a quarantine station at the port of San Francisco."

"Senate Bill 1641.—To establish a permanent quarantine station at or near Cape Charles, Virginia."

Resolutions of the Legislature of the State of Virginia, in the nature of a memorial, asking the establishment of a quarantine station at Cape Charles:

Resolutions of the Board of Trade of Chester, Pa.

Petition of the Board of Health of Rockford, Ill.

Resolutions of the Board of Health of Charleston, S. C.

Petition of the Medical Society of San Diego, Cal., and

Resolutions of the American Public Health Association.

All urging the establishment of national quarantine at the points of danger upon the Gulf and seacoast.

The Committee expresses its belief "that it is the duty of Congress to so regulate commerce as to prevent the introduction of contagion from foreign countries into the United States, and has therefore reported, with favorable recommendation, an original bill providing for the establishment of seven thoroughly-equipped quarantine stations, in addition to the one already provided for at the mouth of the Mississippi River, viz.: at the Delaware Breakwater; Cape Charles, Va.; Sapelo Sound, Key West, Fla.; San Diego, Cal., and Port Townsend, Ore.

"The estimated aggregate cost of construction and equipment of these quarantine stations, including the one at the mouth of the Mississippi River, is $489,500, and the estimated aggregate annual cost of maintaining them is $93,000."

It is not conceivable that when once the National Government has committed itself so far, both in policy and expenditure, it will long delay the extension of this system northward, and making it uniform throughout the entire coast-line. Of course, there will be difference of opinion as to whether the bureau into whose hands would fall the superintendence of these stations under the existing law, is the appropriate one; whether the preservation of the public

health is not an interest of sufficient magnitude to entitle it to a department of its own. But when such substantial safeguards are offered us, it would not be the part of wisdom to reject them on merely theoretical or sentimental grounds. Consider, for a moment, the unprotected condition of the Delaware River, as revealed in the reports just referred to; ascending the bay and river a distance of nearly eighty miles before the Pennsylvania or Philadelphia quarantine station is reached, through a populous country, passing numerous villages, and two considerable cities, with no other restrictions than the local regulations of the coasting trade; the Philadelphia Quarantine Station situated close to a large and rapidly growing city, whose Board of Trade have already taken the alarm and protested, in a memorial to Congress, against the dangerous contiguity; and yet, both the State of Pennsylvania and the city of Philadelphia are utterly powerless to remove it to a better and more distant location, from the simple fact that the boundary of the State is only a few miles lower down the river, and the entire intervening distance along the river-bank is one continuous settlement.

The only proper site for a quarantine station is within the limits of the little State of Delaware, and the expenditure necessary to establish and maintain a properly equipped station for the protection of Pennsylvania, New Jersey and the "parts beyond," would drive her into immediate and hopeless insolvency. There are but two solutions of this pressing local problem: either the National Government must promptly establish a well-appointed quarantine down the bay, or the three States of Pennsylvania, New Jersey and Delaware must form a tripartite alliance and unite in defraying the expenses of protecting themselves and the nation against their common foe.

It is a question, however, whether this would not be establishing an *imperium in imperio*, which would be more defiant of the constitutional restriction than the Federal interference for which it would be a substitute.

In conclusion, I beg leave to offer the following resolution.

Resolved, That the Section on State Medicine respectfully suggests to the American Medical Association the importance of formally urging upon the National Congress the duty of at once assuming entire control of the maritime quarantine, of taking immediate measures to make such quarantine effective before the advent of hot weather.

Some Remarks on Diseases of the Labyrinth of the Ear.

BY FRANCIS DOWLING, M.D., U. S. PHYSICIAN, CINCINNATI, FORMERLY OF THE U. S. NAVY.

Read in the Section on Otology, of the Meeting of the American Medical Association, Cincinnati, May 9th, 1888.

By way of premise to the few remarks which I desire to make on affections of the labyrinth, I will give a short outline of a case that came under my observation some months ago. The patient was sent to me by one of my colleagues of this city, to whom I am indebted for a history of his case previous to the time when he came to consult me. Mr. G., age thirty-two, by occupation a painter, of a somewhat dissipated appearance, has a strongly built physique, and a florid complexion; came to see me on the 5th of December, 1887, to consult me about a difficulty of hearing, and buzzing in his ear. His physician says that on the night of the 21st of November, 1887, he was called to see him, and found him in bed, semi-conscious, with flushed face and a stupid expression; had headache, and when he tried to get up was so troubled with dizziness that he had to lie down again. His right arm was found to be paralyzed, and he was so deaf that it was almost impossible to communicate with him by speech. The patient had no fever, complained of no pain in the ears, and the loss of consciousness was not particularly marked.

He was placed under appropriate treatment by his physician, and in about ten days the paralysis of his arm had disappeared, but the deafness and dizziness remained, and in addition, he was troubled with buzzing in his ears.

When the patient came to my office his gait was decidedly unsteady; he looked scared and worried, and there was a blank, vacillating look about his face. I put some questions to him, but it was almost impossible to make him hear, and finally, in order to do so, I had to approach close to his ear and shout at the top of my voice. When his answers came, I noticed that his voice was quite thick, and there was evidently some difficulty in collecting his thoughts, as he hesitated considerably in his answers to my questions. He could not hear the watch, even when placed in contact with his ears; the ear-drums presented a whitish, dried-up looking appearance, and some few radiating lines could be seen, going from the circumference toward the center.

I tried inflation of the ear by Politzer's method, but there was no improvement in the hearing as a consequence. I applied the tuning-fork over the bones of the head, but he could only partially hear it over the right frontal region. There is no disease of the naso-pharynx, or throat.

I placed the patient under the following treatment: Small blisters were applied back of the ears, and these were dressed with an ointment composed of ext. belladonna and ungt. hydrarg. This blistering process was kept up for about a month, with but little, if any, success. It was then discontinued for a couple of weeks, and again resumed. In addition to this, one-thirtieth of a grain of strychnia sulph. was given internally three times a day. This was continued for two weeks, when the dose was increased until it produced some tingling sensation in the tips of the fingers; then the dose was decreased to one-fortieth of a grain. Under the influence of the combined treatment, externally and internally, the patient's condition began to improve, and by the middle of February he could hear the watch with the left ear, at a distance of five inches, and with the right ear at two inches, and the ordinary tone of voice could be heard at some twelve feet. The ringing in the ears still continued, but had somewhat abated. There was still some unsteadiness of gait, but the step was more certain than when the patient first went under treatment.

By the advice of some friends the patient now went away to try the influence of some healing springs, and I lost track of him for a while.

March 28th the patient returned. The deafness and ringing in the ears are very much worse. His speech is still thick, and he still has difficulty in collecting his thoughts.

The patient is still under treatment, and his hearing is somewhat better. The unsteadiness of gait has entirely disappeared, but the buzzing in his ears is still very troublesome.

There is no history of an hereditary taint in the case of this patient, and his teeth do not present the characteristic notched edges described by Hutchinson as evidence of such an inheritance.

The case in question interested me exceedingly. At first I was at a loss to know to what condition of the labyrinth to attribute the somewhat complex group of symptoms that were present. Judging from the sudden and great deafness, coming on without any previous ailment, it might be consid-

ered as a case of nervous deafness, due to an affection of the auditory nerve, and this would be strengthened by the co-existing trouble of speech, and particularly as the conducting power through the bones of the skull was almost *nil*. But, on the other hand, the marked improvement that took place in the degree of hearing, rather tended to negative this diagnosis. Formerly, almost all affections of the ear characterized by sudden deafness and buzzing in the ears, were classed as cases of nervous deafness, but of late years, owing to a better knowledge of the pathology of the ear, the percentage of cases of nervous deafness has been considerably reduced. Kramer, one of the early writers on diseases of the ear, states that out of two thousand patients, something like one-half were classed as cases of nervous deafness. At the present day, the number has been reduced to about four in one thousand cases.

In order to establish anything like a clear diagnosis of disease of the auditory nerve, it will be well to exclude disease of the external and middle ear by a careful examination of the auricle, the external meatus, the membranæ, tympani, etc. Then, attention should be paid to the throat, especially the naso-pharynx, in order to determine if there is any disease located in these parts, as it is a well-known fact that a large percentage of the diseases of the middle ear have their starting-point in disease of the throat. Then the condition of the Eustachian tube should be ascertained, and lastly, inflammatory diseases of the labyrinth should be excluded; in this way, a fairly correct diagnosis will be established.

In making a diagnosis of disease of the auditory nerve, there is one symptom that has almost a direct bearing, and that is, total, or nearly total deafness. In no other disease of the labyrinth is the deafness so pronounced as in this. In all the others, words spoken into the ear by means of a tube may be heard more or less distinctly; but they produce no impression in well-marked cases of disease of the auditory nerve.

The prominence of the group of symptoms—sudden deafness, dizziness on attempting to get up, tinnitus aurium, a flushed face, semi-consciousness, a staggering gait, and paralysis of the arm—pointed rather strongly to the existence of what is called Menier's disease of the labyrinth; but there was no sickness of the stomach, or vomiting, symptoms which are generally present in this affection of the ear.

On the whole, judging from the persistence, and pro-

nounced character of the symptoms, deafness and tinnitus aurium, and the length of time that the staggering gait lasted, it is quite probable that there was some effusion or exudation into the semi-circular canals. Flourens has demonstrated by experiments on animals, that any injury of this portion of the ear is followed by these symptoms, and the same has been verified in cases of disease or injury of this portion of the ear in the human subject. Furthermore, I am inclined to think that, from the irregular life which the patient led, there was a specific foundation for the trouble in question. In cases of labyrinthine trouble of this nature, with a specific foundation, the degree of deafness is usually very great, and the disturbance of hearing very rapid. Oscillation in the hearing distance is rare. When any improvement takes place, it is gradual, and does not take place at once. This corresponds to the course pursued by the symptoms in the case in question.

In conclusion, I wish to state that the subjective noises in the ears, in the case which I have cited, proved to be a very distressing symptom, and persisted after the staggering gait and dizziness had entirely disappeared, causing the patient to lose considerable rest at night. This symptom, although to a greater or less degree present in almost all affections of the middle ear, is hardly ever so pronounced or persistent in character as in affections of the labyrinth, and it is about the last of the chain of symptoms to abate. It is often so distressing that it completely undermines both the physical and moral powers of the individual, and whatever can be done to alleviate this symptom proves a veritable boon to the afflicted.

I have accomplished more, in cases of this nature, by the judicious use of strychnia than by any other remedy or remedies that I have tried. I always increase the dose until it produces some tingling in the ends of the fingers or toes, and then gradually decrease it until I reach about one-fortieth of a grain, three times a day. In this connection, I wish to cite the following case, which was treated by me in this way, with at least partial success, after all the usual remedies had failed.

Miss S., age twenty-three, presents a pale, waxen complexion, and is evidently of nervous temperament; came to see me on March 18, 1887, to consult me about a difficulty in hearing, and noises in her ears. She says that about a month ago she began to hear badly, had a slight sense of

fullness in her ears, and some buzzing. This trouble continued to increase until finally she was compelled to seek medical advice.

She hears the watch at four inches, with the left ear, and at ten inches with the right ear. There is nothing abnormal in the appearance of the ear-drums; inflation of the middle ear does not help the difficulty in hearing. As the patient had a marked chlorotic appearance, I ordered her to take the syr. iodid ferri, and in addition to this, blisters were applied back of the ears. The improvement that took place in this case was gradual. At the end of about three months' treatment the hearing was about normal, and the ringing in the ears had almost entirely disappeared.

September 23d, nearly four months afterward, she came back to consult me about the noises in her ears, which she says came on about the fore part of September, and has since continued to increase in intensity. The hearing continues about normal, but the noises, she says, almost drive her to distraction. She hears them all day, and particularly so when she lies down at night.

As the patient still had a marked anemic appearance, I again placed her on iron and sherry wine. This she continued to take until November, with but little, if any, benefit, as far as the tinnitus was concerned. I now ordered her the one-thirtieth of a grain of strychnia three times a day, and this she continued for a month. Still, there was no marked improvement. The dose was increased to one-fifteenth of a grain, three times a day. On the fourth day there was some tingling in the ends of the fingers, and the dose was decreased to one-fortieth of a grain three times a day, which was continued for about a month. By January, 1888, there was a marked improvement in the tinnitus aurium.

What was strange in the above case, was that there was very little deafness connected with the very marked subjective noises. I consider this case one of anemia of the labyrinth, although there were no accompanying symptoms of giddiness and vomiting, symptoms which usually belong to such cases.

127 Garfield Place.

A correspondent of the *New York Medical Record* says that in Germany the operation for gastrotomy is so common that few care to witness even Billroth's operations for gastrotomy.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

THE CONVULSIONS OF CHILDREN.—A CLINICAL LECTURE BY PROFESSOR GRAUCHER.

Two cases of convulsions in infants of the service are presented. The one, aged eighteen months, had a slight benign crisis during convalescence from measles, complicated with broncho-pneumonia. The second, a little girl, aged twenty months, has had convulsive seizures in the course of a broncho-pneumonia.

The latter was nursed at the breast, walked at eleven months, and was weaned at fifteen months. Since a short time it has coughed somewhat, and on December 20th the increase of the cough set in and fever appeared. On December 22d a broncho-pneumonia was disclosed.

December 26th, the temperature being 104°, some slight convulsive attacks came on. On the 28th, at noon, temperature being only 102.2°, a convulsive crisis set in, tetanic convulsions without clonic movements, with dyspnœa. After the crisis, comatose resolution. At the evening visit the coma was found still persisting.

On the morning of the 29th the coma had disappeared; but a semi-torpor still remained; cyanosis of the face, which was very marked the evening before, had diminished; the surface is remarkably cold; great feebleness of respiration.

On the same day of the improvement, at eleven o'clock, a fresh crisis like the preceding one, then comatose resolution. About 1 P. M., another seizure, commencing with grimaces of the mouth, turning of the eyes, shocks of the arms and legs, then comatose resolution. In this last crisis some clonic movements were noted.

At two o'clock another seizure, and death by asphyxia, as usually occurs in repeated convulsions.

At the autopsy the lung was found hepatized; congestion of the brain, but no hemorrhage. The kidneys were healthy. The urine taken from the bladder did not contain any albumen; nothing abnormal in the liver.

The study of the convulsions of the first and second infancy is a very interesting, but very confused, chapter of infantile pathology.

Intestinal worms have been and are still for the public a

frequent cause of convulsions. To them are also easily attributed the nervous states, the insomnias, etc., of infants.

We must carefully remember that there is a great difference between the convulsions of the first and those of the second infancy.

M. Graucher says convulsions may be divided into two grand groups: first, the essential convulsions of reflex origin; second, the symptomatic convulsions. The convulsions of reflex origin do not present the same characteristics at all times. There are several varieties of them.

1st. They may be epileptiform; the child is taken suddenly. It falls down with a cry. There is the tonic phase, the clonic phase and the coma, just as in epilepsy.

2d. Convulsions only tonic, as in the second observation here recorded. This form has been denied; but it exists.

In the preceding observation, the tetanic spasm was constant, permanent, and lasted twenty minutes without relaxation of the muscles. This has been well verified.

3d. Convulsions above all clonic, incessant agitation, extension and flexion successive and alternate of the limbs.

4th. Partial convulsions confined at times to one limb; at other times to the face, to the commissures, to the muscles of the eye.

There are still other localized convulsions which are difficult to recognize. These are the internal convulsions of the muscles of the trunk of the diaphragm. We should always examine into the state of the muscles of the thorax and diaphragm when we see a child fall down suddenly, becoming blue, cyanosed. These cases may terminate in death.

5th. All these forms may exist mixed. It is thus that we may see a convulsive crisis in which each one of the convulsions has a different form.

There are two points that remain to be examined. Are there any phenomena precursory to convulsions or not?

There has been cited the insomnia, the hebetude and the irrascibility of character. However small the value of these signs, they should be borne in mind.

What are the consecutive phenomena? Death may ensue by asphyxia, or there is a complete return to health, or confused pathological states may develop—paresis, troubles of sensibility, etc.

Why do children have convulsions so frequently? To

reply to this question, there have been invoked reasons moral, sentimental and physiological.

Bouchert attributes the frequency of the convulsions in infants to the sensitiveness and to the irritability of their brain.

The researches of physiologists tend to prove the contrary. The classical experiment of the frog that is decapitated, and in which the reflex movements are exaggerated, is well known.

More interesting are the experiments of Simonoff. He has studied the results of punctures of the brain, made with needles, traversed by a constant current, then by an induced current. He investigated the state of the reflexes of the muscles of the leg at the moment of the experiment, and has thus judged of the action of cerebral irritation on the excito-motor power of the spinal cord. He found that the reflex power of the leg was diminished when the needle was plunged into the anterior regions, and that the same was the case with the electric current. He found, also, that the reflex power is in no way affected if the needle is plunged into the posterior regions, the cerebellum. These studies, which demonstrate that the anterior lobes possess a modifying power over the spinal cord, date from 1886.

The works of Fritsch and Hitzig have shown that these same anterior lobes are excito-motor. They are the same regions as the modifying centers of Simonoff; they are, therefore, both modifying and moderating at the same time. But these centers do not exist in the young infant. Soltmann demonstrates this on the new-born animals. The cerebral localizations are only gradually formed in the infant with age. This is the reason why convulsions are so frequent in infants. The moderating influence does not exist. This is the physiological reason.

What are we to do when confronted by a case of infantile convulsions?

The first thing necessary is to make the diagnosis, a thing not always easy of accomplishment.

It is best to see the convulsion, if possible, and not rely upon the reports of others.

If we find ourselves in the presence of a case in a child that has previously enjoyed good health, and that has no fever, we may by that eliminate convulsions occurring at the outset or in the wane of febrile maladies.

The child's clothing should be entirely removed, and the child examined in the nude state.

This alone may suffice to arrest the convulsions, by disembarrassing the child of a pin which pricked it, or of clothing which hurt it.

These diverse causes are rather frequent.

We must explore the mouth and examine into the state of dentition. We must examine the nose, the ears; not forget the moral emotions and the imitative instinct. It often happens, however, that, despite a minute examination, the cause remains unknown.

If we find ourselves in presence of a child having a high fever, we should think at once of a pneumonia, a broncho-pneumonia, or an eruptive fever.

A third case is that which concerns an infant whose health is deteriorated, whose dentition is difficult, or who is convalescent from a malady.

The prognosis should always be a reserved one. We must not commit ourselves by saying, "It is nothing;" for other crises more grave, even fatal, may occur.

The occurrence of a convulsion is always a grave matter, especially if it be a first convulsion.

Troupeau recommends not to leave the patient, and relates that he remained six hours by the bedside of a little girl.

As to treatment, we should appear as if doing a great deal, and still not do very much. We should give a calming potion, anodyne, and a full, lukewarm bath. We should be mistrustful of warm and cold baths and of revulsives. A laxative injection is frequently beneficial.

For the following day we recommend the milk diet in view of possible digestive troubles, of the possible existence of Bright's Disease, or of transitory albuminuria.

As to the convulsive attack itself, we may have the child inhale a few drops of chloroform; but not going as far as anæsthesia.—*Union Med. de Canada.*

CARDIAC AFFECTIONS OF RHEUMATIC ORIGIN IN CHILDREN—THEIR COMPARISON WITH THOSE OF THE ADULT—PROGNOSIS AND TREATMENT.

According to Professor I. Simon, pericarditis of the adult reveals itself by an anguish and by precordial pains, which are augmented by pressure in certain spots, by a sense of oppression and by palpitations. In children these phe-

nomena are very much attenuated, the pain is almost never complained of, and very frequently we must seek for it by pressure over the precordial region. But its outline is more accentuated in consequence of the slight thickness of the thoracic wall.

The cutaneous fremitus can be noted; in fact, the physical are all very well marked in the child. A friction sound is heard which may be readily confounded with a bruit de souffle. If there be effusion, the sounds are more muffled, farther away, and the heart is displaced. If endocarditis co-exist, a bruit de souffle, with its maximum in the systolic period, will be heard over the apex.

Neither hypostasis nor œdema nor hydropsy occurs, the contrary to what is the case in the adult.

Acute cardiac affections are very well borne by children. We must, therefore, never make a fatal prognosis, because the endocarditis may be cured, the murmur may disappear, and the hypertrophy of the heart may be compensated later on by the development of the rest of the body.

As to local treatment, we should resort at the outset to the emission of blood by the aid of four or five leeches applied over the precordial region. If the child is not vigorous, it is, perhaps, better to resort to dry cups, or to the inunctions with:

Oil of Hyosciamus, . . .	20 grms.
Chloroform, ...	10 grms.
Extract Conii, ...	2 grms.

Then cover the whole region with cotton-wool and oiled silk.

Vesicatorils are not useful until the tenth day. They should be renewed every four or five days. They are allowed to remain on for five hours, and are then relapsed by a linseed poultice, and, to avoid suppuration, a borated vaseline dressing is then applied.

The general treatment consists in the administration of the following mixture:

Tinct. Scilla.
Tinct. Convallaria Maial. āā ten to twenty drops.

Which is repeated every day to diminish the irritability of the cardiac plexus and to favor diuresis.

Furthermore, if the rheumatism be still in full activity, we administer, for five or six days, one to two grms. of soda.

The bromide of potassium is useful if there be painful palpitations.

Where the milk regime is not well borne, it is replaced by soups and panadas. When the fever has ceased, we can allow fish, eggs and meat jelly.

The affection demands about two months of continuous and steady attention, in order that convalescence may be assured.—*Union Med. de Canada.*

Selections.

Failure of the Heart in Valvular Disease, and its Treatment.

THE last few years have witnessed a gradual change in our ideas on the subject of cardiac diseases. The opinion is now firmly rooted in the minds of the advance-guard of the profession, at least, that cardiac murmurs are often devoid of the grave significance that was formerly always attributed to them. So, too, we have come to learn that considerable damage to the valves may be so thoroughly compensated by hypertrophy that it seems permissable to speak of recovery from organic disease of the heart. True, the anatomical lesion persists; but the individual thus affected may live for years, without impairment of his health, and with a working capacity in no way reduced from his normal standard.

It is a very decided step in advance if we are able to state positively that organic cardiac disease is not *per se* fatal. How often, in the past, the doom of some poor sufferer has been sealed by the gloomy prognosis of the physician, will probably never be known. But the time has now come when the "prognosis of despair"—a prognosis from which there was scarcely an exception in former years—must make way for the modern doctrine of hope in the possibility of a cure. What was formerly equivalent to a sentence of death may be commuted then to carefulness for life.

One of the most noteworthy contributions to modern cardiology appears in the *Practitioner* of January, 1888. Dr. J. Mitchell Bruce, the author of the article in question, points out that the subjects of *perfect compensation* of valvular disease are devoid of morbid symptoms. Cardiac

hypertrophy, while indicating disability of the heart in some respects, denotes at the same time that nature has made up for this disability by supplying added force to the muscular mechanism of that organ.

From this point of view we can readily agree with the author when he says: "We search anxiously for hypertrophy, we welcome its oncome, we work to establish and maintain it."

When, however, in these cases of perfect compensation, symptoms of cardiac distress arise, we are warned that "failure of the heart" is setting in. We no longer regard these symptoms as due to the valvular lesion *per se*, but as brought about by failure of the cardiac wall.

Careful treatment of this condition may often remove the parietal weakness, and when we have succeeded in doing this, we say that compensation is re-established. The patient then enters upon a fresh period of freedom from symptoms, although the valvular disease itself remains unchanged.

Now, Dr. Bruce argues that "if cardiac failure make its appearance in chronic quiescent valvular disease, it must have originated in some conditions or circumstances unfavorable to compensation; and prognosis and treatment, to be sound and successful, must be framed on a full knowledge of what these conditions or circumstances are." He does not refer to the necessity for a general acquaintance with the causes of broken compensation, but to the application of this knowledge in each individual instance of cardiac failure that comes before us. In his experience it is "by no means common for the physician to inquire into the causes of cardiac failure in every case that seeks his advice." When a patient with palpitation, dyspnœa, cough and threatening dropsy presents himself for treatment, he doubts "whether we are always careful to put the question to ourselves: What has happened to this man that he should come to me with these symptoms after twenty years of freedom from suffering since the original rheumatic endocarditis? Time was when we were satisfied in such a case with the diagnosis—mitral incompetence. We should now consider this diagnosis as insufficient, and would complete it by saying—mitral incompetence with cardiac failure." He ventures to say that "this diagnosis is still short of the full truth, and that when we proceed to offer a prognosis based on such a conclusion only, and to apply

treatment, we proceed on insufficient information. We must first determine the *cause of the failure*—why the heart has broken down—whether from muscular strain, or nervous exhaustion, or alcohol, or other discoverable cause." He maintains that until this point is satisfactorily settled we are not justified in offering a forecast or ordering a therapeutical course.

Dr. Bruce next proceeds to consider the most frequent causes of broken compensation. According to him, they may be described as follows: 1. Muscular overwork. 2. Nervous causes, such as the depressing emotions of fear, grief, distress and anxiety. Worry, here as elsewhere, is potent for much mischief. Nervous excitement of a pleasurable kind may also work evil. 3. Imperfect blood-supply to the heart. This may result from general hæmatic impoverishment, or from a diseased state of the coronary arteries. 4. Intercurrent diseases, among which rheumatism and pulmonary mischief are most to be dreaded. 5. Causes peculiar to women, such as pregnancy, confinement, protracted lactation, the climacteric, or even difficult menstruation. 6. The every-day use of tea, coffee, tobacco and alcohol, which act, according to Dr. Bruce, as cardiac poisons. 7. Increase of the valvular lesion, due to endocarditis, rupture of a diseased valve, etc. 8. The advent of what may be called the "limit of compensation." By this is meant the limit that is placed on life and health by the occurrence of secondary changes in the lungs, liver, kidneys, and, indeed, in the cardiac wall itself. Cardiac dropsy is finally developed. Judicious treatment "may again and again secure for a time a fresh accommodation, a new adjustment of the physiological balance; but the end can not be indefinitely averted—the limit of compensation is finally reached."

Sound treatment must be based on a sufficient knowledge of pathology, and also on correct views concerning etiology. Dr. Bruce utters these warning words, in which we heartily concur: "Do not treat cardiac disease without sufficient evidence that treatment directed to the heart is required. Let us be sure that the heart is failing before we proceed to apply our remedies. The day has gone by when men with any pretension to therapeutical judgment did not hesitate to treat murmurs—when they ordered digitalis and iron, let us say, for a mitral *bruit* which they happened to discover in a dyspeptic patient. If the heart is really failing, and treat-

ment called for, do not apply treatment in a routine fashion. Cardiac failure is but an effect; rational treatment begins with attention to the cause. We must discover the cause of the break-down, and remove it if possible. Our means of treatment will vary widely in different cases. We have an extensive choice of remedies. We are not confined to a few routine methods or a few habitual drugs, but can turn to account every means, hygienic and therapeutic, that is suggested by faithful investigation and sound judgment. This is a very encouraging consideration. The poor, overworked, half-starved laborer must be ordered rest and warmth and food in hospital. The sedentary free-liver requires the very opposite line of treatment—he must be sent to climb mountains or to hunt, to endure for a time the miseries of palpitation and breathlessness, if compensation is to be successfully restored. We treat intercurrent rheumatism with remedies—such as salicylates—calculated to quickly dispel it. We interdict the consumption of cardiac poisons. We remove the overworked, ill-fed, anæmic girl from business in town to the country."

Of course, there will always remain a certain proportion of cases of heart-failure in which the cause is not discoverable. Here a rational symptomatic therapy is alone indicated. The balance of circulation is to be restored as quickly as possible by such direct cardiac remedies as digitalis, strophanthus, or convallaria. But even here the general condition of the patient is not to be lost sight of, and what hygienic surroundings, rest and proper nutrition can do is never to be underestimated.—*Ed. Med. Record.*

Etiology and Treatment of Tetanus.

BY M. A. RUST, M.D., RICHMOND, VA.

To the comprehensive and instructive paper of Dr. Brock scarcely anything can be added. I only propose to make a brief summary of the state of our knowledge regarding the etiology of tetanus.

Dr. Brock, in the cases reported by him, logically refers to the hypodermic needle as the carrier of infection. If such an agency of the hypodermic needle be a fact, it certainly is a fact of rare occurrence, whilst the production of abscess, suppuration or erysipelas by the agency of the same

needle, is a fact of every-day occurrence. It is a matter of common observation that tetanus *may* arise in sequence of a rusty nail or splinter, soiled chips and odds-and-ends being trodden into the foot, or thrust into the flesh of other parts of the body, of injuries from finger-nails, claws, teeth, pricking or cutting tools, instruments, etc. On the other hand, the same objects, under similar conditions, produce, in the generality of cases, no ill effects beside the solution of continuity; in a considerable number of cases, suppuration, abscess, erysipelas, etc., and especially—perhaps once in ten thousand times—tetanus. Lacerated wounds may likewise, in the same exceptional manner, give rise to tetanus. There is no need to go far ahead in search of an explanation. A lacerated wound is generally a wound contaminated by the object which produced the laceration.

Some time ago the supposition arose that tetanus, like other calamities which befall the wounded, was the result of the action of an organism from without, particularly from dust and dirt. In 1884–85, Nicolaier, with the coöperation of Fluegge, succeeded in discovering this organism in common earth. The organism, being rod-shaped, is a bacillus, not a coccus. Out of eighteen specimens of dirt, fetched from far and near, from forests, fields, gardens, roads, streets, yards, floors, etc., inoculated into rabbits, Guinea-pigs and mice, twelve specimens produced tetanus in those animals. Cultures of these bacilli likewise produced tetanus seventy-two times out of eighty-one inoculations. The time of incubation is from two to five days. Pure cultures have not, till now, been obtained. The bacillus of tetanus is always met in company with various species of cocci of suppuration and bacteria of putrefaction. Rosenbach, in 1885, succeeded in transferring tetanus from *man* to rabbits, Guinea-pigs and mice. Cultures of these bacilli, through many generations, likewise produced tetanus. From these cultures, Brieger (in 1886) extracted an alkaloid or ptomaine, to which he gives the name of *tetanin*. It has the formula, $C_{13}H_{30}N_2O_9$. Injected into the tissues of live animals, this alkaloid produces all the phenomena of tetanus.

Unlike the micrococci of septicæmia, etc., which invade the whole body, and are found in distant organs, the bacillus of tetanus is only met within, at and around the original wound; it does not invade the whole body; matter for inoculation must be taken from this wound; when procured

from other organs, from muscles, nerve trunks, spine, etc., it proves ineffective.

These are the facts; at present they only rest on experiments upon animals, and leave our bacillus of tetanus, for the time being, with a somewhat problematic character. He has still to strive for that public recognition which is universally bestowed upon others of his fellow microbes, on bacillus tuberculosis, bacterium anthracis, micrococci of suppuration, etc.

As no invasion of the body ensues—as the formation of the poisonous alkaloid, out of the elements of the albumen of the tissues, only takes place in the original wound whence the poison is absorbed—we should conclude that this poison, called tetanine, would be the sole originator of tetanus. On the other hand, as it appears that this poison never forms without the presence of the bacillus, the claim of this microbe to the authorship of tetanus is worthy of consideration.

Before a final conclusion can be arrived at, two conditions must be fulfilled—1st, the respective researches and experiments made by the few must be confirmed by the many; 2d, it must be shown that wherever there is tetanus, there is the bacillus also, just as was proved in regard to tuberculosis, splenic fever, suppuration, etc.

Now, supposing these proofs adduced—as in all likelihood they will be erelong—the pathology of tetanus will not find itself enriched. In none of the animals which succumbed to tetanus could any anatomical lesion or alteration be found. We may, perhaps, gain a negative advantage by the relinquishment of sundry theories, as "ascending neuritis," and the like, and regard tetanus as the result of an alkaloid poison. In a distant future, advanced chemistry may discover the antidote capable of following the trail of the direful poison. In the near future, however, in whose antechamber we are standing, we shall have recourse to the means, into which all materia medica is fated to resolve itself—*prevention!*—*Virginia Medical Monthly.*

Experimental Researches on Tuberculosis.

Dr. Cornet publishes in the *Internationale Klinische Rundschau* an account of a series of experimental investigations on tuberculosis which he has been conducting for the last two years in the Berlin Hygienic Institute. The ex-

periments were divided into three groups, the first of these dealing with the air and dust in dwelling-houses, hospitals, etc., the second group comprising observations directed to the parts of the body affected by tubercle artificially introduced in different situations, and the third group consisting of attempts to solve the problem of the possibility of rendering the tissues unsuitable as a cultivating medium for the tubercle bacilli. In order to examine the walls and floors of rooms, the surfaces are washed over with sterilized sponges, which were then used to inoculate broth, the resulting culture being injected into the abdominal walls of three guinea-pigs. The animals (if they did not die of some intercurrent affection) were killed forty days later, and a careful necropsy made. Twenty-one hospital wards, in which most of the patients were phthisical, were examined in this way, the result being that from the dust of fifteen of them tuberculosis was set up. Similar observations made in lunatic asylums showed that the walls of these establishments are very frequently infected with tubercle. Private houses where persons affected with phthisis had lived gave, likewise, very distinct, positive results; out-patient departments and surgical wards appeared, on the other hand, to harbor no tubercle. One important observation made was, that where phthisical people were in the habit of expectorating on the floor, this was certain to yield infectious cultures, whereas in cases where handkerchiefs or spittoons had always been used, the liability of the dust to prove infectious was very greatly diminished. Regarding the organs affected, Dr. Cornet fully confirms Koch's observation that, except the actual point of introduction, the organs most affected are the nearest lymphatic glands; thus, when inhalation is the mode of infection adopted, the bronchial glands are the organs most affected; when injections are made into the abdominal walls, the inguinal glands of the side selected show the greatest degree of tuberculous infection, and when the virus is introduced directly into the abdominal cavity, the omentum is the part most affected. The therapeutical observations were made with tannin, "pinguin," sulphuretted hydrogen water, menthol, corrosive sublimate, creolin and creosote, all of which were given in much larger doses, in relation to the body weight, than any one would think of prescribing for human beings. In the case of corrosive sublimate, toxic symptoms were induced before the tubercle was injected, and care was taken with

all the other remedies, that the system was well saturated with them. Notwithstanding all this, however, every animal died, not the slightest hindrance being apparently caused to the development of the tubercle bacilli by any of the remedies. Dr. Cornet remarks that, of course, the results of experiments on guinea-pigs must not be taken as necessarily holding good for human subjects, as he has himself repeatedly proved the great value of creosote in the treatment of phthisis. Again, some infected guinea-pigs were sent to Davos, others being kept in Berlin, the conditions of life of the two sets of animals being rendered as similar as possible. All of them died in about the same time, and no perceptible difference was found in the degree of tuberculous infection of the tissues in the two classes of cases. Dr. Cornet promises to publish the details of all his observations in the *Zeitschrift für Hygiene.—Lancet.*

The Influence of Heredity

In the Production of Crime and the Punishment of Hereditary or Confirmed Criminals.

[Prize Essay Gross Medical College.]

BY W. M. YANDELL, M. D.

Heredity, "the biological law by which living beings tend to repeat themselves in their descendants," or, the transmission of the psychical and physical qualities of parents to their offspring," has, in its influence on crime, been studied and written of by a number of able men; but if their conclusions have been acted upon by any law-making body in this country, I am unaware of it.

Even a cursory knowledge of this law in relation to crime leads irresistibly to the conclusion that our laws are radically wrong in conception, in regard to the punishment of the hereditary criminal class.

It is not within the scope of this paper to more than glance at the salient points of the subject, a systematic exposition not being thought of; and I shall endeavor, as far as possible, to confine myself to heredity in connection with crime, its influence in the production of the consumptive, scrofulous, cancerous and other dyscrasiæ being eliminated, except incidentally.

The great difficulty that I encounter is, not in finding sufficient data on which to base my conclusions, but in compressing within the limits of an essay, hurriedly prepared, the interesting facts that I have gleaned from the best sources.

It will not be denied that while "some families are characterized by such virtues as business integrity, truthfulness, temperance and frugality, others are equally marked by dishonesty, mendacity, drunkenness and prodigality, and that vicious and criminal propensities recur in some families as a rule, with some exceptions, and in varying degrees of depravity." A low standard of morality and intelligence is the rule; but to this there are numerous exceptions.

A most remarkable example of the form of heredity under consideration "has been traced through six generations, by Dr. Dugdale, in the descendants of a depraved woman named Margaret Jakes. Of seven hundred and nine individuals, the great majority consisted of murderers, thieves, prostitutes and idiots."

From Wharton and Stille I get the following: "Nothing," says Mr. Hill in his work on 'Crime,' "has been more clearly proved than that crime is, to a considerable extent, hereditary." He adduces numerous cases in confirmation of the fact. One of the most striking applies to the families of three brothers, containing together fifteen members. Of these no fewer than fourteen were utterers of base coin, while the fifteenth, who appeared to be an exception to his kindred, was at last detected setting fire to his own household, which he had insured for four times its value. "Suppose each of those uttering base coin to have passed only one piece a day, and to have had a career of five years' duration (which there is reason to believe is about the average), no fewer than twenty thousand offenses might have been prevented by removing the three brothers permanently from society, before they became fathers of families. The disposition to commit crime is often unquestionably an incurable form of insanity. Hence, we read of persons who are all their lives criminals, and only terminate one term of imprisonment to commence another. The case of a woman is cited by Mr. Hill, who continued in a career of crime for twenty-five years; and also of another woman, fifty years of age, who had already been in prison sixty-seven times. Furthermore, he refers to a woman who had

been in the police cells, in Edinburgh, at least one thousand times, chiefly for acts of violence.

"But it should not be forgotten, that unless there be hereditary insanity, mere hereditary tendency to crime is no more a defense to crime than is the doctrine of hereditability of sin."

"Dr. Steinau, in his essay on hereditary disease, mentions a very interesting incident bearing on this point. 'When I was a boy, there lived in my town an old man named P., who was such an inveterate thief that he went in the whole town by that name; people speaking of him used no other appellation but that of "the thief," and everybody then knew who was meant. Children and common people were accustomed to call him by that name, even in his presence, as if they knew not his other name, and he bore it, to a certain degree, with much good natural forbearance. It was customary for the tradesmen and dealers who frequented the annual fair in the place, to enter into a formal treaty with him; that is, they gave him a trifling sum of money, for which he engaged not only not to touch their property himself, but even to guard it against other thieves. A son of this P., named Charles, afterward lived in B., during my residence there. He was respectably married and carried on a profitable trade, which supported him handsomely. Still, he could not help committing many robberies, quite without necessity, and merely from an irresistible inclination. He was several times arrested and punished. The consequence was that he lost his credit and reputation, by which he was at last actually ruined. He died, while still a young man, in the house of correction at Sp., where he had been confined for his last robbery. A son of this Charles, a grandson of the above-mentioned and notorious P., in my native town, lived in the house where I resided. In his earliest youth, before he was able to distinguish between good and evil, the disposition of stealing and the ingenuity of an expert thief, began already to develop themselves in him. When about three years old he stole all kind of eatables within his reach, although he had plenty to eat and needed only to ask for whatever he wanted. He, therefore, was unable to eat all he had taken; nevertheless he took it and distributed it among his playfellows. When playing with them some of their playthings frequently disappeared in a moment, and he contrived to conceal them for days, often for weeks, with a slyness and sagacity remarkable for

his age. When about five years old he began to steal copper coins, and at the age of six years he began to know something of the value of money and he looked out for silver pieces; and in his eighth year he only contented himself with larger coins, and proved to be on public promenades an expert pick-pocket.

"He was early apprenticed to learn a trade; but his master being continually robbed by him, soon dismissed him. This was the case with several other tradesmen, till at last, in his fourteenth year, he was committed to the house of correction."

Maudsly says, in "Body and Mind": "The observations of intelligent prison surgeons are tending more and more to prove that a considerable portion of criminals are weak-minded or epileptic, or come of families in which insanity, epilepsy, or some other neurosis exists. Mr. Thompson, surgeon to the general prison of Scotland, has gone so far recently as to express his conviction that the principal business of prison surgeons must always be with mental defects or diseases; that the diseases and causes of death among the prisoners are chiefly of the nervous system; and in fine, that the treatment of crime is a branch of psychology. He holds that there is among criminals a distinct and incurable *criminal class*, marked by peculiar low physical and mental characteristics; that crime is hereditary in the families of criminals belonging to this class, and that this hereditary crime is a disorder of the mind, having close relations of nature and descent to epilepsy, dipsomania, insanity and other forms of degeneracy.

"Such criminals are really *morbid varieties*, and often exhibit marks of physical degeneration—spinal deformities, cleft palate, stammering, imperfect organs of speech, hare-lip, club-foot, deafness, paralysis, epilepsy and scrofula."

Moreau relates a striking case, which is of interest as indicating the alliance between morbid or degenerate varieties, and which I may quote here: "Mrs. D., aged thirty-two years. Her grandfather kept an inn at the time of the great French Revolution, and during the Reign of Terror he had profited by the critical situation in which many nobles of the department found themselves, to get them secretly into his house, where he was believed to have robbed and murdered them. His daughter, who was in his secrets, having quarreled with him, denounced him to the authorities; but he escaped conviction for the want of

proofs. She subsequently committed suicide. One of her brothers had nearly murdered her with a knife on one occasion, and another brother hanged himself. Her sister was epileptic, imbecile and paroxysmally violent. Her daughter, after swimming in the head, noises in the ears, flashes before the eyes, became deranged, fancying that people were plotting against her, purchasing arms and barricading herself in her room, and was finally put in an asylum.

Thus, there were, in different members of this family, crime, melancholia, epilepsy, suicide and mania. Need we wonder at it? The moral element is an essential element of a sound and complete character. He who is destitute of it, being, to that extent, unquestionably a defective being, is therefore on the road to, or marks race degeneracy, and it is not a matter of much wonder that his children should, when better influences do not intervene to check the morbid tendency, exhibit a further degree of degeneracy and be actual morbid varieties. I think that no one who has studied closely the causation of insanity will question this mode of production.

"It is an indisputable, although extreme fact, that certain human beings are born with such a native deficiency of mind that all the training and education in the world will not raise them to the height of brutes; and I believe it to be not less true that in consequence of evil ancestral influences, individuals are born with such a flaw or warp of nature that all the care in the world will not prevent them from being vicious or criminal, or becoming insane. Education, it is true, may do much, and the circumstances of life may do much; but we can not forget that the foundation on which the acquisitions of education must rest are not acquired, but inherited. No one can escape the tyranny of his organization; no one can elude the destiny that is innate in him, and which unconsciously and irresistibly shapes his ends, even when he believes that he is determining them with consummate foresight and skill."

The foregoing interesting facts I have selected from a great number; but they are amply sufficient to base the argument on for a radical change in the treatment of incurably insane or irretrievably vicious criminals.

The paramount object in the punishment of crime being the protection of society, reformation of the criminal sec-

ondary, it follows that where there can be no reformation, the only end in view must be the protection of society.

That society is protected by the temporary confinement of professional thieves, released at the end of their terms to recommence the commission of crimes, is not true, except for their terms of imprisonment.

If society is not protected, and the reformation of such criminals is hopeless, it follows that, except for the example in deterring others from crime, such punishment is purely vindictive—a thing not in accord with the enlightened spirit of the age.

If the proposition that the protection of society is the paramount object in the punishment of crime be correct, it matters not whether the inherited "irresistible inclination to the commission of crime quite without necessity" be a form of insanity or not.

Whether incurably insane or irretrieveably vicious, the only reasonable treatment is PERMANENT REMOVAL FROM SOCIETY, where they can neither prey upon society nor propagate their species.

Again, such punishment promises well in its effect on the "transitory mania," or, as it is commonly known, the "insanity dodge" of murderers. Just why the hereditary thief should be debarred from pleading "transitory mania," unless it is that he is unable to pay for expert testimony and first-class legal advice, is not plain.

Certainly, if a man who, in a fit of jealousy, shoots down a poor prostitute is possessed of a "transitory frenzy," he is liable to a recurrence of the attack at any time; he is incurable, and should be confined for life.

Murder should be made odious as petty thievery is, and its punishment as certain; the certainty, not the severity of punishment, being valuable as an example.

If I have clearly indicated the salient points on which I would base an argument, I have accomplished all that I hoped for in the limits of this essay.

New York Academy of Medicine.

SECTION ON NEUROLOGY—DIPHTHERITIC PARALYSIS.

Dr. A. Jacobi referred to the course and kinds of diphtheritic paralysis. There are undoubted cases of central

origin on record, he said, and a few cases of ataxia had been observed. He believed that Dr. Thomson was correct in assuming that paralysis is not to be taken as sequela of diphtheria, but rather as really part and parcel of the disease. If there is any disease which runs an indefinite course, it certainly is diphtheria; this course sometimes being extended for many months. One difference between this and the other contagious diseases is, that once having had it, the subject is all the more liable to subsequent attacks. In many instances, he believed, those repeated attacks simply show a continuation of the disease, which is hidden away in the tonsils or lymph bodies, and liable at any time to fresh outbreaks.

As a rule, the paralysis first appears in the fauces, affecting deglutition, and then successively in the muscles of ocular accommodation and in the extremities. Finally, there may be respiratory paralysis, which often proves fatal. This order can not be relied upon in every instance, however, and, in making a diagnosis in cases where there have been no throat symptoms, one of the main points to be depended upon is the fact that in diphtheritic paralysis only a comparatively small number of muscles is usually affected at the same time. Another point is the fact that the sphincter muscles are so rarely affected that this can be said to be almost never the case.

He then went on to say that paralysis not infrequently comes on during the acute stage of diphtheria. In heart-failure, which is so common an occurrence in this disease, there is, no doubt, a failure of the heart nerves, either the sympathetic or the pneumogastric. This is an accident liable to occur in any case of diphtheria, and he had therefore always insisted on the free administration of alcoholic stimulants and cardiac tonics from the very first. After symptoms of heart-trouble have once appeared, it is usually too late for such remedies to do any good. Respiratory paralysis is about as fatal as heart failure. Hence, the most energetic measures are called for to combat it, and strychnia and electricity should be pushed to the utmost extent possible.

Dr. Andrew H. Smith said that it seemed to him very remarkable that we should so frequently have recovery from diphtheritic paralysis when the anatomical lesions were as marked as they were. The paralysis had always also been somewhat of a stumbling-block to him in trying to accept

the hypothesis that diphtheria is originally a merely local disease. He had no doubt that there were cases of diphtheria in which no membrane ever appeared, and the fact that instances are on record in which diphtheritic paralysis occurred without any previous throat symptoms certainly goes to sustain the idea that diphtheria is essentially a general disease; while the membrane is only an indication of it, just as the erythema of scarlatina is the outward manifestation of that disease. In scarlatina and the other exanthemata the eruption does not constitute the disease. Dr. Smith then referred to the case of a child whose mother had diphtheria in which the diphtheritic membrane appeared, not in the throat, but in the groin, where the skin was chafed. It is also remarkable, he went on to say, that in cases of diphtheritic paralysis not preceded by the appearance of membranes in the throat, the paresis usually begins in the fauces. This would seem to indicate a peculiar predilection of diphtheria for this region, aside from the simple deposit of membrane there.

Dr. L. Putzel said that he did not understand exactly what Dr. Thomson meant by the post-latent stage of diphtheria. This disease is different from scarlatina, because in scarlatinal nephritis the bacterium which is the exciting cause of the acute affection still remains in the system. It seemed to him more probable that the acute attack of diphtheria leaves the nervous system in a weak condition, in which any slight cause may bring on paralysis. As regards the fact that the paralysis usually makes its first appearance in the fauces, the reason for this seemed to be because the throat is so much affected in the acute attack. As to those rare cases in which paralysis occurred without any previous local trouble, he was not aware that a sufficient number of them had been observed to base any conclusion upon.

Dr. Malcolm McLean described a very severe and prolonged attack of diphtheritic paralysis occurring in his own person a few years ago, in which, he said, more muscles and a greater extent of cutaneous surface were affected than is usual in cases which recover. It lasted for four and a half months, and involved the muscles of respiration as well as those of the throat and of both the upper and lower extremities; but did not affect the sphincters. With the paralysis there was marked hyperæsthesia. On the fourth day of the acute attack of diphtheria, which preceded the paralysis, symptoms of heart failure appeared, and the heart

continued weak throughout the course of the subsequent paralysis. On one occasion the pulse fell to 32 (afterward suddenly rising for a time to 160), and this was accompanied by a most violent attack of angina pectoris, which nearly proved fatal. The ordinary rate of the pulse was 52. The practical point which Dr. McLean said he wished to impress was the necessity in such cases of the most absolute rest. In his own case he was treated for a long time with faradization and galvanism, and in order to receive the treatment was taken in a carriage to the office of the gentleman who applied them. Although they were employed with the greatest skill, he only grew worse instead of better; with the exception that the original paralysis of the fauces was markedly relieved. At length so great was the pain and discomfort which he suffered that he determined to take absolute rest in bed; and as soon as he adopted this course he began to improve. He remained in bed for a month, and the result was so satisfactory that he was firmly convinced that in these severe cases, unless this absolute rest is insisted on, no other treatment will be of any avail.

Dr. S. Seabury Jones mentioned a case of tabes dorsalis which occurred in a druggist who had received a wound in the hand while assisting at a tracheotomy performed on a diphtheritic patient, the paralysis commencing in the wounded hand. In such cases, according to Trousseau, the paralysis sometimes attacks the throat first. He then referred to the case of a mother whose child had diphtheria, but who did not have any membranes, as far as could be ascertained, although she complained of her throat. The woman consulted him for difficulty in swallowing, with numbness of the tongue and impairment of the sense of taste. The case resembled one of bulbar paralysis, but the patient made a good recovery under the use of iron and strychnia. In diphtheritic paralysis he believed the lesion might be either central or peripheral; but Trousseau in his classical work had brought out so beautifully all the points in connection with the subject that little or nothing remained to be said upon it.

Dr. Birdsall said that as regards the pathology of diphtheritic paralysis, he also believed that while in many instances there was simply a neuritis, cases of undoubted central origin sometimes occurred. In the latter, however, the central lesion was apt to give rise also to peripheral degeneration. In adults diphtheritic paralysis is relatively

more frequent than in children, and it very often occurs in cases in which the original attack of diphtheria is very slight. As to the matter of heart failure, it is a question whether the trouble is of the same nature as the paralysis, noted after the acute attack, or whether it is merely functional in character. A point against its paralytic origin is the early stage at which it occurred. As to the etiology of diphtheritic paralysis, it seemed to him entirely possible that it might be due to the original poison causing the disease; the delay in its appearance being perhaps attributable to the comparatively long time which it takes for such toxic agents to act upon the nervous system.

Dr. Thomson said that he had purposely refrained from taking up the subject of heart failure in the paper, since it presented so many complications. He doubted very much, however, whether it was due to the mere cause as the later paralysis. In many cases he believed there was myocarditis, and it seemed probable that this was the fact in Dr. McLean's case. He had not touched upon the topic of therapeutics in the paper, but he quite agreed with Dr. McLean that electricity is of no service. It is highly desirable to stimulate the peripheral extremities of the nerves, and this can be best accomplished by applying to the throat equal parts of honey and red or black pepper. In paralysis of the extremities a solution of pepper (a drachm to the pint) is also a useful local application. As to Dr. Putzel's reference to the post-latent period of diphtheria, Dr. Thomson said that the paralysis is an indication of processes going on subsequently to the acute stage, and this post-latent stage he believed to be a general characteristic of all the acute fevers. The post-latent stage varies in its manifestations in the different diseases, and it seems probable that its phenomena are due to the presence of ptomaines in the system. —*Philadelphia Med. News.*

Microscopy.

San Francisco Microscopical Society.

Dr. Mouser distributed some slides showing *Bacillus anthracis* in the lung of a guinea pig. Several of these mounts showed very clearly the tendency of the rods to

assume the *Leptothrix* form, especially in the smaller capillaries. The bacilli were exceedingly sharp and clear, the staining having been effectively done with gentian violet and Bismarck brown.

Mr. Wickson showed specimens of *Iceryæ purchasi* (the cottony cushion scale), and dwelt upon the importance of thoroughly studying out the life history of this insect, which is inflicting such terrible ravages among our citrus fruit trees. He also showed the beautiful eggs of a *Pentatomæ* upon an apricot, while Dr. Bates exhibited the eggs, living larva, and perfect insect of a closely allied species of the same genus.

A paper on "Errors Likely to Occur to Microscopical Observations" was read by Mr. Hanks. He dwelt upon the fact that the same object will sometimes make different impressions upon the eyes of different observers. For instance, the hemispherical "bosses" upon certain diatoms are persistently seen by some as cup-shaped depressions or concavities. As an exemplification of this fact, he had chosen as his exhibit, at the late reception of the Society, a nickle coin, shown under a low amplification. A record was kept of a little over two hundred visitors who viewed this coin, and of this number some forty saw the elevated portions of the surface as depressions. After more prolonged examination, about one-half of these persons were enabled to see the coin in its true aspect, still leaving, however, some ten per cent. of the original number who were unable to see in any way but as depressions the very evidently raised portions of the coin. The paper brought out an interesting discussion of the causes producing this peculiarity.

Dr. Riehl exhibited a slide under a one-fifth inch dry objective, showing numerous bacilli obtained from the sputum of a consumptive patient. In the preparation of the slide, the generally approved methods of staining had not been followed; but he claimed this had not unfavorably affected the result. In the discussion which followed, and which was generally participated in, Dr. Stallard described the staining method now most widely used, and which has been found to yield the safest and most satisfactory results.

A slide of anthrax bacilli in the kidney of a guinea-pig was added to the cabinet by Dr. Mouser. He stated that the animal had been inoculated with these bacilli from a pure culture grown in his laboratory. Seventy hours after

inoculation the animal died, and its lungs, kidneys and other organs were found crowded with the bacilli in question. In the kidney they were found in the capillaries, very plentiful in the Malpighian tufts, but not at all in the tubules.

President Wickson brought an interesting gathering of fresh-water algæ, in fruit, from Berkeley. It contained a species of *Spirogyra*, which was apparently new, and it was therefore referred to the Secretary for determination.

A specimen of the insect *Pentatoma*, the eggs of which had been shown at a previous meeting, was received from Dr. Gray, of Benicia.

Prof. F. L. Clarke, of Honolulu, was unanimously elected a corresponding member. The gentleman, being present as a visitor, was introduced to the meeting, and, after tendering his thanks for the honor conferred, gave an interesting account of microscopical matters in the Hawaiian Islands. After narrating the career of the Microscopical Society which once existed there, he stated that he had been commissioned by the king (who, it seems, takes more interest in scientific matters than is generally supposed) to perfect arrangements for the systematic exploration and study of the natural history of the Islands. With this end in view, Professor Clarke announced that he had already established connections with a number of specialists of this country and Europe, for the purpose of furnishing them with specimens of the fauna and flora of the Islands for study and determination. In further pursuance of this plan, he said that the San Francisco Microscopical Society would be plentifully supplied with collections of objects suitable for microscopical investigation, and also that it had been selected as an agent for the distribution of such material to societies with similar aims in other parts of the world. The wonderful richness of the Hawaiian cryptogamic flora was alluded to, and the hope expressed that by the opening up of this comparatively unexplored field of study to the scientific workers of the world, results of the highest value would be obtained.

A. H. BRECKENFELD, *Rec. Sec'y.*

Microbes of Disease.

THE microscopy of putrefaction is a theme that ought to be well studied by all medical men, as it will place in their

hands knowledge that might save many valuable lives. In this particular department of bacteriology we have to investigate microbes that are not only death-dealing, but have also a most wonderful power of propagation and multiplication.

It was in the summer of 1875 that my attention was first called to those organisms, through a doctor who had his office near mine in Cincinnati, bringing me a bottle of sputa from a patient who was dying from phthisis pulmonalis. He had been very much interested in the microscopical examinations I had been making for months previously of the menstrual discharges of women in health and in disease, and thought he would bring the sputa for investigation. In a day or two after he called at the office and asked if there was anything in the sputa, and I jocularly remarked, "There's millions in it." Little did I think at the time that the day would come when those microphytes would be recognized as the chief factors in the process of disease and decay. A few days ago I read a review of a lecture given by Dr. Dallinger, of London, on "Saprophytic Fermentation; or, Putrescence," and it vividly brought back to my mind many microscopic cyclic changes that I have watched with intense interest, often for hours at a time, or when not otherwise engaged. He graphically described the appearance of a putrescent fluid under a powerful lens, in which the common forms of the sphæro, vibrionic and spiral bacteria occur in such numbers, that he endeavored to give some idea of their minuteness by stating, that in a ten-thousandth part of a cubic inch a number exists equal to the population of a hundred million solar systems.

Ten organisms, so far, have been detected as factors in the putrefactive process, but they appear at different stages. Two, however, are *only* found in tropical countries.

The bacterium termo is always found in the primary stages of putrefaction of animal matter, and remains till the process is completed.

As this bacillus is capable of reproducing itself by fissure every three minutes, it does not take a long time for the creature to become legion. With the appearance of the spirillum, noxious gases are evolved from the putrescent mass. Bacillus number three is an energetic little fellow, and reminds me of the railroad Irishman with his pick and shovel, as he is supplied with two hooked flagella, the longer of which he uses to hold on to the solid matter, and then

he plunges the shorter one into the mass, the curved end tearing up the substance at each stroke. Other bacilli are supplied with from three to six flagella, and they further the process of disintegration by descending upon the putrescent material with a rhythmical hammer-like motion. The reproduction of some of the organisms by segmentation ceases after a certain time, and then further reproduction is only possible by the sexual method as follows: Two of the microphytes adhere to each other, the lower one absorbs the contents of the other, then it becomes of an irregular shape, is filled with minute bodies, which swell, burst the maternal sack and disperse in the menstruum. From semi-opacity they become transparent, then the growth of cilia takes place. It takes only twenty minutes from the bursting of the maternal sack to the full growth of the flagella. Dr. Dallinger believes that after eight hours of segmentation by fissure, it is necessary to return to the sexual reproduction for further increase of the organisms.

In conclusion, I would wish to draw the reader's attention to the great danger of introducing any putrescent material into the circulation, either by neglect or accident, as the smallest nucleus will, if neglected, in a few hours fill the human system with a mass of saprophytic microbes, the life of the victim succumbing to their overwhelming numbers and death-dealing emanations.

DAYTON, Ky., June 9, 1888. JAMES BARNSFATHER.

Gleanings.

STERILITY IN THE MALE.—Dr. Kehrer, of Heidelberg, has recently published some researches on this obscure subject in a work entitled *Beiträge zur Klinischen und Experimentellen Geburtskunde und Gynäkologie.* To forty already reported cases of sterile marriages where he had examined the semen, he has added fifty-six more. In 3.12 per cent., complete impotence was certain; in 30.21 per cent., the semen did not contain spermatozoa (*Azoospermia*); in 11.45 per cent., these organisms were deficient in quantity (*Oligozoospermia*), and in 55.20 per cent. they were present in abundance (*Polyzoospermia*). Amongst the cases of azoospermia, in many instances no cause for the anomaly could be traced; in a fifth, masturbation had avowedly been practiced; in

more than two-thirds, the subjects had suffered from gonorrhœa, but disease of one or both testicles could not be detected in many of these patients, so that Dr. Kehrer suspects other complications besides disease of the epididymis, such as obstruction of the ejaculatory duct through prostatitis, or fatty degeneration of the tuberi seminiferi. The proportion of subjects where there had been gonorrhœa was the same in the cases of oligozoospermia, where yet a chance of fruitful coitus remained, whilst amongst the sterile men where polyzoospermia was discovered, only half as many had been subject to gonorrhœa. Dr. Kehrer believes, judging from his researches, that in at least a third of the cases of sterile marriages, the husband was the party at fault, and gonorrhœa was the primary cause of the barrenness. Here it must be remembered that, unfortunately, that disease is extremely common amongst young, unmarried men, and in making researches in long series of fertile marriages, a large proportion of the husbands would probably be found to have suffered from gonorrhœa. Noegerrath fell into a doubtful line of argument somewhat like that of Dr. Kehrer, and Bumstead, amongst others, exposed the fallacy. Dr. Kehrer believes that other sources of sterility will yet be discovered, such as influences directly prejudicial to the germ-cell or sperm-cell.—*British Medical Journal.*

Bacteriology of Smallpox.—Professor J. Hlava describes in the *Sbornik Lekarsky*, a Bohemian medical journal, the results of some microscopical and bacteriological researches he has lately made on the contents of variolous pustules and the blood and viscera of smallpox patients. In four out of five cases, streptococcus pyogenes was found in the blood and viscera. In the skin and in the postular contents there were found, in addition, staphylycoccus albus, saccharomyces (Proteus Zenkeri), and staphylococcus citreus cereus. The identity of the microörganisms found with pyogenic microbes was demonstrated experimentally, but none of them produced smallpox. Professor Hlava believes that the variolous poison produces the characteristic changes in the epithelium of the skin, and that, in consequence of these, pyogenic cocci invade the dermis, being carried thither by the circulation, which they enter through abrasions of the surface of the pharynx and larynx, which, he says, are invariably to be met with in smallpox patients. Thus variola would appear to be, in the majority of cases, a disease

due to a mixture of infections, variolous and pyogenic, the latter class of infection entering the body subsequently to the former.—*Lancet.*

Antipyrin in Hæmoptysis.—In the *Meditziuskoïe Obozrenië*, No. 5, 1887, p. 520, Dr. M. Byvalkevitch, of the Vilna Military Hospital, states that antipyrin is an excellent remedy for pulmonary hemorrhage of every kind. The statement is based on ten cases of hæmoptysis in patients suffering from phthisis, bronchiectasis, cardiac disease and traumatic injury of the chest. The following mixture was invariably employed by Dr. Byvalkevitch: ℞.—Antipyrini, ℥ss; aq. destil., ℥iv.; essentiæ menthæ pip., ggt. xv., M.D. S. A teaspoonful every two or three hours. In none of the cases were more than two doses of the mixture required completely to arrest hæmopysis, even when the daily loss of blood amounted to two fluid pounds. In some of the patients, ordinary hæmostatics, such as ergot, ergotin, digitalis, atropine and Haller's elixir, had been previously tried without effect.—*British Medical Journal.*

(I.) Amyl Nitrite for Opium Poisoning. (II.) Lead Poisoning by Dalley's Salve.—Dr. T. D. Haigh, of Fayetteville, N. C., reports these two cases (N. *C. Med. Jour.*, February, 1888).

Case I. Woman had taken ℥iiss laudanum about three hours, and was apparently in a dying condition, totally unconscious; face and hands livid purple; pulse flickering; pupils dilated but ragged in outline; respiration not exceeding four per minute. A hypodermic of atropin had been given, but with no visible effect. A pearl of amyl nitrite was broken and imperfectly administered. A second pearl was more carefully administered, and the effect was wonderful. The face and hands quickly resumed their natural hue; respiration gradually but rapidly became natural, and the pulse became more steady, though still rapid and weak. She opened her eyes when spoken to, and requested to be left alone. One of the pupils remained dilated for some days afterward.

Case II. A year-old child, previously healthy except constipation. One night she had violent colic, from which she was readily relieved, but did not rally quickly, and remained languid, with loss of appetite, increasing pallor and dullness of eyes. The muscles began to waste, and it became evident this was not a usual case of impaired digestion.

Paralysis and convulsions suddenly set in, but no cause could be found until the mother stated that she was using "Dalley's salve" on her own breast for fissured nipples. This salve contains from four to five per cent. of lead, probably, in the form of an acetate. The mother had been in the habit of smearing her nipples with salve at bedtime, and the child lying by her side nursed *ad libitum* during the night.

Typhlitis and Perityphlitis.—The *North Carolina Medical Journal*, February, 1888, contains a clinical lecture on this subject by Prof. A. Hardy, of Paris, France. Patient male, age twenty-eight, laborer, temperate, previously healthy, except is ordinarily constipated. During the night had violent colic, attended by nausea, but no vomiting or diarrhœa, and he had headache, fever, prostration and chills from time to time. Two days later the pain was intense in right iliac region, exaggerated by pressure, radiating to the left and upward, pulse 110; temperature 103°+. Deep pressure over iliac-fossa region gave feeling of a resistant tumor, sausage-shaped. Castor oil caused three liquid stools, but the percussion dull sound remains. The cæcum is evidently impacted with fæces, which has caused inflammation, extending even to the neighboring peritoneum. Albert, in 1838, first described this disease of typhlitis and peri-typhlitis. The cæcum is fixed in the iliac-fossa, resting directly on the cellular tissue covering the right iliacus muscle, and the peritoneum passes over it, instead of investing it, covering only the anterior part and sides. Hence, a perforating cæcal ulcer lets the contents of the bowels filter into the cellular tissue. Typhlitis is rare under age of eight or ten years; is more frequent in men than women. The chief lesion is ulceration of the cæcum and inflammation and suppuration of the cellular tissue, sometimes extending down the thigh. But again, a very grave termination may be in peritonitis—with or without perforation. It is impossible to say, in a given case, whether perforation will occur or not. Suppuration is quite as grave, for it leads to iliac abscess, which may open into the peritoneum, but more frequently into the intestine. In beginning treatment of simple typhlitis, mildly purge with castor oil, soda sulphate or a dose of seltzer; if peritonitis, apply leeches and give opium, and use good judgment.

Sulphuretted Hydrogen Gas for Phthisis Pulmonalis.—Dr. A. P. Brown, of Fort Worth, Texas, reports (*Tex.*

Cour. Rec. Med., February, 1888) three cases of consumption treated by his partner, Dr. J. W. Irion, and himself, each with pronounced relief. One of the patients was pregnant, but the continuous use of the gas gave proof of immunity from danger to the fœtus. The test that proves that the sulphuretted gas given per enemata enters the lungs, is to have the patient breathe on a piece of white blotting-paper that has been soaked in a solution of acetate of lead, when a brownish black color occurs on the paper, according to the amount of gas expired.

Vinegar for Epistaxis.—Dr. H. C. Ghent, of Belton, Texas, says (*Tex. Cour. Rec. Med.*, February, 1888) Dr. Frank Allen and he, having had good results from injecting *dilute apple vinegar* in a case of obstinate hemorrhage after a vesico-vaginal fistula operation, have also used it in two cases of nose-bleeding with satisfaction. Inject a little into the bleeding nostrils. No doubt dilute acetic acid would do as well.

Tape Worms.—Gerhard has used Schaflint's remedy for tape worm—in every case with complete success:

℞. Granati cortici radicis, . . ℥ ss.
Seminorum peponis, . . ℥j.
Pulveris ergotæ, . . . ℥j.
Aquæ bullientis, . . . ℥viij.
Fiat infusion.

℞. Extracti filicis maris ætherici, . f℥j.
Olei tiglii, ... *m*ij.
Pulveris acaciæ, . . . ℥ij.
Fiat emulsio.

Mix the emulsion with the infusion for one dose, to be given at ten o'clock in the morning, having eaten no breakfast, and having taken a full dose of Rochelle salts the previous evening. In every instance but one the parasite was expelled alive, in two hours after taking the medicine. One singular peculiarity is the fact that the worm is nearly always voided entire, with its head fastened to the side of its own body, which very much facilitates the finding of that very important portion of the animal.

The Treatment of Flatulent Dyspepsia.—Pepper, in a recent clinical lecture, stated that flatulence may result

from the excessive formation of gas. Under these circumstances, such remedies as sulphurous acid, which is a powerful antiseptic, will be found useful. It may be given alone or combined with small doses of strychnia. He prescribed as follows :

℞. Acidi sulphurosi, . . . ℥iss vel ℥ij.
Strych. sulph., . . . gr. ss.
Tr. card. comp., . . . ℥ss.
Aquæ, ... ad ℥iv.
Sig.—One drachm after meals, in water.

You may resort to a different class of remedies and give creasote. This is a local stimulant to the stomach, and in atonic cases is of service. It is at the same time a powerful antiseptic and anti-fermentative agent. Creasote is best given one-half or one hour after meals, when the process of fermentation is about beginning. At this time the gastric digestion should have passed through the acid stage, and the contents of the stomach should be neutral or alkaline. Given at this time, the creasote may be advantageously combined with an alkali, as sodium bicarbonate.

℞. Creasote, ... gtt. x.
Sodii bicarb., . . . ℥ij.
Pulv. acaciæ, ... q. s.
Aquæ, ... ℥v.
Sig.—Two drachms one hour after meals.

In place of the sodium bicarbonate in the above formula the subnitrate of bismuth may be employed.

If it is recognized that there is not only a state of atony with a tendency to fermentation, but that there is also a deficiency of gastric power, pepsin or ingluvin may be given. Pepsin is best taken in acid mixtures, and should be given at the acid stage of the digestion. At the same time, if the administration of the drug is postponed for a short time after meals, it comes at a time when the power of the gastric juice is about exhausted.

℞. Pepsin. fort., ... ℥j.
Creasot., ... gtt. x.
Bis. sub. carb., ... ℥ijss.—M.
Et ft. pulv. No. xxx.

One of these powders, in a small gelatine capsule, can be given one hour after each meal.

Ingluvin is a powerful digestive agent, and may be substituted for the pepsin. I have found it of service in cases where pepsin does not work well, and I should be disposed to say, where the mucous membrane of the stomach is decidedly irritable.

Again, in the same line of thought, we have agents, like powdered charcoal, which act as absorbents of the gases, and are, at the same time, anti-putrefactive and anti-fermentative in their action. Powdered charcoal, with soda or bismuth, may be given a couple of hours after meals, and in the class of cases of which I have been speaking, may afford a great deal of temporary relief. When charcoal is given, the patient should be informed that it will cause blackening of the stools.—*Polyclinic*, May, 1888.

A Bullet Which had Passed through the Abdominal Wall Discharged per Anum.—Dr. J. O. Stewart, of Cedarville, O., reports the following case: "Laura B——, aged sixteen, colored, was shot on August 2, 1887. The ball, which weighed sixty-eight grains, penetrated the abdomen to the right, and a little above the umbilicus. The opening made by the ball was round, and was not probed beyond a depth of one inch. The wound was washed with water containing carbolic acid, and absorbent cotton with adhesive plaster was applied. The patient rallied well from the shock. The treatment was directed toward absolute rest. The bowels moved eighteen days after the accident. Urine, during this time, was dark, and contained a substance like coffee-grounds. She vomited occasionally during the whole time of her confinement to bed, which was about three months, and at times the vomited matters contained a little blood. Her temperature frequently was as high as 105°, and was kept down by antifebrin administered freely, in doses of about five grains, every three to five hours. The ball was passed per anum on the thirty-sixth day. It was considerably altered in shape, and was indented in several places. The patient was under the care of my father, Dr. J. M. Stewart, and was seen frequently also by myself."

Hyoscyamine in the Treatment of the Insane.—Dr. W. A. McCorn, of the New York City Asylum for the Insane, Ward's Island, writes: "In a recent issue of the *Medical Record* is noted a fatal result from the use of hyoscyamine in one-twelfth-of-a-grain dose, by Dr. Johnson, of Toronto. I have had considerable experience in the use of

the drug, and believe it to be a useful remedy, particularly in the treatment of the insane. A fatal result from hyoscyamine is of extreme rarity, and as yet the first case is to be recorded in this institution, where it is used extensively. It is administered subcutaneously, in doses varying from one-twentieth to one-fifth of a grain, Ulrich's amorphous sulphate always being used. It has proved itself to be very efficacious in quieting the motor excitement of acute, chronic and recurrent mania, and in senile dementia with destructive proclivities; but it is not as good an agent as chloral hydrate in general paralysis of the insane. It is a drug usually considered dangerous by asylum physicians, but unjustly so, as it is much less liable to be attended with unpleasant symptoms than are chloral and the bromides. As is the case with other narcotics, those to whom it is given become gradually habituated to its effect; but it is always well to begin with a small dose, as one-twentieth of a grain, and increase as necessity demands. In all cases that I have seen, where untoward symptoms have manifested themselves, they have yielded readily to the use of stimulants."

Stretching the Optic Nerve, writes Dr. W. B. Meany in the *Lancet*, is alone practiced by De Wecker, whose performance of which I had the pleasure of witnessing in a patient with marked ataxic symptoms, suffering from gray degeneration of the optic nerve. There was no pupillary response; field of vision limited concentrically; papillæ simply atrophic; chromatic reflections. The vision of the left eye was lost. Stretching of the optic nerve was practiced in the left or lost eye. The eye (left) was rotated toward the temporal side; a conjunctival incision was made near the insertion of the internal rectus, the tendon of the muscles divided, and the capsule opened and freely loosened. The instrument for stretching—resembling a diminutive obstetrical forceps—was introduced so that the little blade or hook at its extremity encircled the optic nerve; then the other blade or branch was also introduced, when the two were closed, the optic nerve resting in the concavities of the two blades. A slight lifting of the eyeball concluded the operation, the blades being then withdrawn. It was observed that the operation left no other appearance than that usually met with in an ordinary tenotomy, except that the pupil remained dilated. The operation was performed under antisepsis and cocaine.

ADMINISTERING QUININE BY THE SKIN.—Dr. F. A. Carter writes to the *N. C. Medical Journal*, that if one use an oleate of quinine he will have no trouble in securing its ready absorption. "I," he adds, "have repeatedly caused cinchonism about as rapidly in the case of children by this method of administering quinine as by giving it by the mouth. Four minims of a twenty-five per cent. oleate correspond very nearly to one grain of the sulphate, and twenty minims can be absorbed by the skin of the abdomen in a very few minutes and with very little friction."

THE ETIOLOGY OF TYPHOID FEVER.—In concluding a paper in the *Journal of the American Medical Association*, Dr. I. N. Davis says: "The conclusion which follows, therefore, is that the real nature of the materies morbi of typhoid fever is but little known; that if it is not autogenetic, its origin many times is involved in impenetrable obscurity; that the organism or chemical product is as likely to assume an active form in the healthy surroundings of an isolated farmhouse as amid the filth of a badly-neglected village or city; that constitutional proclivity, feeble health, or bodily fatigue has much to do in determining an attack. It is more than probable, also, that the poison may remain latent in the system until evoked by physical exhaustion, despondency, or other conditions of vital depression. Twenty-four to twenty-eight days constitute sufficient time for the poison to escape from the body of the sick, ripen if imperfect, and produce a toxic effect on the system of a previously healthy person. The poison which perpetuates the disease is not contained in the stools alone; but may emanate directly or indirectly from the body of one sick with typhoid fever. Water is certainly not the medium which conveys the poison, even in a small majority of cases, in the country.—*Med. Reg.*

A PERFECT LIQUID CATHARTIC.—I can truly say that I have frequently used "Elixir Purgans (Lilly)" with great satisfaction in cases of obstinate constipation, and can cheerfully recommend the use of this preparation to other practitioners of medicine.

GEO. W. HOAGLAND, M.D., Columbus, Ohio.

Book Notices.

THE APPLIED ANATOMY OF THE NERVOUS SYSTEM. Being a study of this portion of the human body from a standpoint of its general interest and practical utility in diagnosis, designed for use as a text-book and a work of reference. By Ambrose L. Ranney, A.M., M.D., Professor of the Anatomy and Physiology of the Nervous System in the New York Post-Graduate Medical School and Hospital, Professor of Nervous and Mental Diseases in the Medical Department of the University of Vermont, etc. Second edition. Rewritten, enlarged and profusely illustrated. 8vo. Pp. 791. Muslin. New York: D. Appleton & Co. Cincinnati: R. Clarke & Co. Price $5.00.

The study of the nervous system has been given great attention during the last decade; and, although great obscurity continues to invest all that pertains to the nervous system, yet very great advance has been made in our knowledge of nervous phenomena. To his very large and greatly developed brain, man owes his superiority over the lower animals and his lordship over them. Under the circumstances, therefore, it is not surprising that, as knowledge becomes increased, and the scope of thought is extended more and more, a greater interest should be taken in the chief organ of the body.

It has been the aim of the author to furnish a reliable guide to the student of neurological anatomy and physiology, in which he may find the views of the leading minds in that field accessible, and the main facts which are applicable to diagnosis clearly interpreted. Much of the matter of the work has appeared in various medical journals.

We concur with the author in the statement that "the rapid strides which are being made in the interpretation of the symptoms of nervous diseases, and the introduction of many new terms, which must embarrass the reader of late monographs, unless he be educated to the present standard of knowledge in this field of medicine, constitutes a reasonable ground for the belief that there is a demand for a volume which shall fit the practitioner and student to pursue his studies in this special line without embarrassment, if not with increased interest."

In a brief notice it is impossible to do justice to the work —to give a correct notion of the scope of it. While it gives a full anatomical description of the brain, spinal cord and nerves, it also discusses fully the physiology of those organs. But it should not be understood that it treats of mental phenomena, or of diseases of the mind. It explains, however, that every act which distinguishes the animated being from the corpse is dependent upon the influence of the nerves, and that, without these electric wires, the heart would cease to throb, the lungs no longer perform their functions, the eye no longer be capable of vision, the ear no longer perceive sound, and that smell, taste, expression and movement would cease to exist.

As a matter of interest, we will state that the author considers it demonstrated positively that the three frontal convolutions, the convolutions which bound the fissure of Rolando and para-central lobule upon the internal surface of each hemisphere of the cerebrum, are distinctly *motor* in their function. The preponderance of clinical testimony goes to show that most of the destructive lesions which are associated, during life, with paralysis of voluntary motion, are confined to this motor area, although a rare case is on record where the motor area was the seat of cystic disease, and still voluntary motion remained unaffected.

As regards the correspondence which is supposed to exist between the weight of the brain and the amount of intelligence possessed by individuals, the author says: "The heaviest brains on record (where the statements are to be relied upon) were possessed by an Indian squaw, a congenital imbecile, and an ignorant bricklayer, both of which outweighed Cuvier and Abercrombie; while a boy thirteen years of age had five ounces more brain than Webster and Agassiz. Such a table shows the utter absurdity of attempting to apply to individuals the rule that the greatest brain power is possessed by the one having the greatest amount of brain substance."

Ferrier has conclusively proven that cutaneous sensation is completely abolished by an injury in and around the optic thalamus.

In conclusion, we will state that the work of Dr. Ranney is a highly interesting one. It embodies the results of researches of distinguished neurologists throughout the world. It is a treasury of knowledge, and we would suppose that every intelligent physician and medical student desiring

to be well informed in regard to the nervous system, would wish to study it.

A Practical Treatise on the Medical and Surgical Uses of Electricity. Including Localized and General Faradization; Local and Central Galvanization; Franklinization; Electrolysis and Galvano-Cautery. By Geo. M. Beard, A.M., M.D., Fellow of the New York Academy of Medicine, Member of the American Academy of Medicine, etc.; and A. D. Rockwell, A. M., M.D., Professor of Electro-Therapeutics in the New York Post-Graduate Medical School and Hospital; Member of the American Academy of Medicine, etc. Sixth edition. Revised by A. D. Rockwell, M.D., with nearly two hundred illustrations. 8vo. Pp. 758. New York: William Wood & Co.

This is the largest and most complete work upon the use of the various forms of electricity and magnetism in medicine with which we are acquainted. In fact, it is exhaustive, going over the whole field and presenting all the discoveries pertaining to the subjects of which it treats, brought to light by all engaged in investigations. That the work has met with great favor in the profession is evident from the fact that it has reached a sixth edition.

The object of the work, as set forth by the authors, is to present in a compact, practical form all that is known on the application of electricity to the treatment of disease. The aim of the authors has been to combine their own extensive and varied researches with localized and general electrization and the labors of all other recent explorers in electro-therapeutics, in a summary which should be at once practical and exhaustive, and which should represent with strict impartiality all that has been really accomplished in this department by every school, in every country, and by all methods.

For convenience, the work is divided into *Electro-Physics*, *Electro-Physiology*, *Electro-Therapeutics* and *Electro-Surgery*. The general differential indications for the use of the two currents, and for the use of localized and general applications, it has been sought to distinguish and elucidate by logical deductions from the known principles of electro-therapeutics, and, above all, from extended experimental comparison.

Each edition of the work, from the first, has been improved by revision and additions. In the second edition, the chapters on Electro-Physics and Physiology were largely rewritten; the method of central galvanization described and illustrated, etc. In the third edition, the highly satisfactory results following the treatment of exophthalmic goiter by galvanization of the sympathetic were given. The fourth edition explained the use of Franklinic electricity. The fifth edition discussed facts concerning the induction coil, its varieties, etc. In the present edition the revision has been with reference to the use of electricity in gynecology, the chapter on diseases of women having been almost entirely recast.

As we have stated, this work is the largest and most complete of any work of its kind in the language. We therefore commend the work to those who have confidence in electricity as a therapeutic agent, believing it to be a powerful means for improving the general nutrition in the immense variety of chronic morbid conditions where it has suffered, and is not, consequently, a merely local stimulant.

Operative Surgery on the Cadaver. By Jasper Jewett Garmany, A.M., M.D., F.R.C.S., Attending Surgeon to Outdoor Poor Dispensary of Bellevue Hospital, Member of the British Medical Association, etc. 8vo. Pp. 150. Cloth. Price, $2.00. New York: D. Appleton & Co. Cincinnati: R. Clarke & Co.

This will be found an excellent work by students and young surgeons engaged in practicing surgical operations upon the cadaver.

In the way of illustrating the scope of the work we will quote a portion of the directions for excising the inferior maxilla:

"Place the subject on the back, with the head slightly raised upon a block. Stand on the right-hand side facing the subject.

"First, one-half of the bone is removed as follows: Extract the middle incisor tooth of the half to be removed. Make an excision through the middle of the lower lip to a point just below the symphisis menti, cutting down to the bone. Join to the lower end of this incision another extending along the lower border of the body, around the angle, and upward, immediately posterior to the ramus of

the bone, until the level of the lobe of the ear is reached. The facial artery is divided between ligatures, as it crosses the bone in a line with the anterior edge of the masseter muscle. Separate the flap thus marked out from the bone by means of the scalpel and elevator, and reflect it upward.

"Divide with a narrow saw the bone downward and outward from the space formed by the extraction of the middle incisor tooth to a point external to the genial tubercles.

"Catch the divided end of the bone with the lion forceps, and draw it upward and outward, while the tissues from the inner surface and inferior border of the body are separated by means of the scalpel and elevator. Guard against the division of the lingual nerve, by keeping the edge of the knife directed toward the bone while separating the tissues below the molar teeth. Turn the bone outward, and cut the muscular insertions from the internal surface, and the anterior edge of the coronoid process; also the insertion of the internal pterygoid. Cut the inferior dental vessels and nerve as they enter their canal. Grasp the bone and depress it. Cut the muscular attachment and the capsular ligament on the anterior surface of the neck of the bone. Dislocate the candyle and twist it loose, cutting any attachments not torn or peeled off. Keep the edge of the knife against the bone, as the internal maxillary artery is just behind and internal of the neck. Tie the inferior dental artery. If it is necessary to prolong the external incision upward to the candyle to effect the disarticulation, Stenson's duct, the transverse facial artery and branches of the facial nerve will be divided."

It is not necessary for us to copy the description for the removal of the other half of the bone.

Full descriptions are given for performing all of the recognized surgical operations which can be practiced upon the cadaver, as amputations, disarticulations, exsections; Chopart's, Pirogoff's, Carden's, Liston's operation; operations on blood-vessels, on nerves, phlebotomy, arteriotomy, transfusion, etc. It occurs to us that it will be found a most useful work.

FOURTEENTH ANNUAL REPORT OF THE SUPERINTENDENT OF THE CINCINNATI SANITARIUM, for the year ending November 30, 1887.

Our thanks are due to the Superintendent, Dr. Orpheus

Everts, for a copy of his last annual report of the Cincinnati Sanitarium to the Board of Directors of the institution.

The buildings which constitute the Cincinnati Sanitarium are located on the suburban heights north of Cincinnati, known as College Hill, amidst the most picturesque scenery of the Ohio Valley, five hundred feet above the level of the Ohio River. They are immediately surrounded by twenty-five acres of improved grounds, park and garden, furnishing elegant and shaded walks, among a great variety of fruit and ornamental trees. The buildings are all comfortably, and some apartments quite elegantly, furnished, with a view to meet the requirements of a variety of patrons, and different classes of cases, for which provision has been made.

The institution offers a number of advantages to its patrons—advantages of a kind which, while some of a similar kind may possess some of them, very few will be found having all of them: (1) Salubrity of location, along with which is combined advantages of country seclusion, with easy access to and from one of the great cities of the country; (2) adaptation of the buildings to their uses, permitting of proper classification and treatment of persons suffering any variety of insanity, or disturbance of brain and nerves, from whatever cause. The victims of injurious habits, as the alcoholic, etc., occupy the cottages, and are entirely separate from other classes of invalids; (3) the institution is established, and is no longer an experiment; (4) all the officers are well-known, reliable men, who are known to possess the ability to fulfill their representations. The Superintendent in charge ranks among the distinguished alienists of this country; (5) the institution has a high reputation, in consequence of the great number of persons who have been restored to health by its care and treatment. It has the entire confidence of the medical profession.

There were remaining in the hospital at the beginning of the year, 55 patients. There were admitted during the year, 190 patients—142 males, 48 females; a grand aggregate of 244.

Of 245 patients, 175 were discharged as follows: 95 recovered, 42 were improved, 32 were unimproved, 6 died, 69 left remaining in hospital.

The percentage of recoveries, Dr. Everts states, as related to the number of admissions, appears to be quite up to expectations, being somewhat above the average for institutions of the kind—receiving all classes of insane persons—in this

country or in any other. The mortality for the year has been unusually low—less than three per cent. of the whole number treated.

The remarkable freedom of the location of the institution from morbid influences calculated to produce disease, is shown by the fact that while, during the latter part of the last year, not only Cincinnati, but other large cities and districts of country, suffered, seemingly in consequence of the long-continued drouth, from the effects of an epidemic of typhoid fever, not an inmate of the Sanitarium exhibited a symptom of any zymotic disease. By far the greater number of deaths that have occurred in the Sanitarium have terminated from conditions of either acute or chronic degenerative diseases of brain structures, accompanied by acute mania, dementia or general paralysis. Malarial fever, pneumonia, erysipelas, dysentery, and other serious diseases often occurring in large public institutions for the care of insane persons, are practically unknown in the Cincinnati Sanitarium.

Dr. Everts' report is a highly interesting one, containing much valuable information in regard to insanity and nervous affections. If we had space, we would like very much to make a number of lengthy extracts from his remarks, but we will have to forego the pleasure for the present. It will afford great satisfaction, we are sure, to its many friends, to know that the Sanitarium was never in a more flourishing condition than at the present time. It has done good work in the past, and gives promise of continuing to do good work.

Editorial.

PAY WHAT YOU OWE.—L. Annæus Seneca, the Stoic philosopher, who lived and wrote during the first hundred years after Christ, made some observations about paying debts that Christians of the nineteenth century could read with profit. Though Seneca was a heathen, yet he taught a code of morals greatly in advance of those practiced by many *honorable* men of our day. He inculcated the duty of paying debts, insisting that there can be no circumstances which can lessen the obligation. With him, it made no difference whether the creditor was a good man or a bad man —if you owe him you must pay him. Nor can any excuse

for not paying him be derived from the belief that an improper use will be made of the money that is employed in discharging the debt.

It sometimes occurs to us that if the works of Seneca could be placed in the hands of our delinquent subscribers, they would be induced to pay us what they owe us. But then, it occurs to us, they all have the New Testament, which contains the injunction, "Owe no man anything;" and that if they will not obey this command from the highest of all books, they would probably give little heed to the advice of a heathen philosopher. It might be, however, that, on learning, by a perusal of Seneca, they were practicing a code of morals in their daily lives that the heathen of olden times would hold in contempt, they would be roused to a sense of duty, and either send us a check for the amount due us, or instruct us to draw on them.

After discussing in a very philosophical manner, at considerable length, the obligation that should be felt by every one to pay what he owes, Seneca, in the way of illustration, relates the following story, in his work on "Benefits," Book VII., Chapter 21: "A certain Pythagorean bought a fine pair of shoes from a shoemaker, and, as they were expensive, he did not pay down. Some time afterward, he came to the shop to pay for them, and after knocking long at the closed door, some one said to him: 'Why do you waste your time? The shoemaker whom you seek has been carried out of his house and buried.' Upon this, our philosopher not unwillingly carried his three or four denarii home again, shaking them every now and then. Afterward, he upbraided himself for the pleasure which he had secretly felt at not paying his debt, perceiving that he enjoyed having made this trifling gain, and returned to the shop, saying to himself, 'The man lives for you; pay him what you owe,' and passed four denarii into the shop through the crack of the closed door, and let them fall inside, thus punishing himself for his unconscionable greediness, so that he might not form the habit of appropriating that which is not his own."

"That he might not form the habit," etc. Who, among those who take a medical journal from year to year, without paying for it, ever become alarmed about its resulting in their falling into bad habits that might eventually injure their moral nature? A Pythagorean heathen, living in the first century, might get worried lest his moral nature might suffer if, perchance, some obstacle should arise interfering with his

paying a debt, but experience leads us to believe that there are not a few Christian doctors of the nineteenth century who would not become at all apprehensive by any such circumstances.

In Chapter XXII. of the same book, Seneca continues to say: "Quod debes quære cui reddas; et si nemo poscet, ipse te appella. Malus an bonus sit, ad te non pertinet." *If you owe anything, seek for some one to whom you may repay it, and if no one demands it, dun yourself; whether the man be good or bad, is no concern of yours; repay him, and then blame him.*

We never heard of any of Seneca's contemporaries charging him with being insane, but we feel sure that if he were living at this time, and should give utterance to such expressions as, "If no one demands from you what you are owing him, you should dun yourself," he would be regarded as stark mad or a natural born fool.

In the way of further evidence that Seneca would be looked upon as a fool, in these days, we will make another quotation from his writings:

"There are some who," he says, "when they have bestowed a benefit, tell it in all societies, talk of it when sober, can not be silent about it when drunk" [hoc sobrii loquuntur, hoc ebrii non continent], "force it upon strangers, and communicate it to friends. It is to quell this excessive and reproachful consciousness that we bid him who gave it to forget it, and by commanding him to do this, which is more than he is able, encourage him to keep silence."

When a surgeon, nowadays, performs an operation that he imagines has benefited the patient, it is not to be expected that he is going to forget it; not talk about it when sober and be silent about it when drunk.

Memorial Bust of Prof. Vaughn.—Prof. Daniel Vaughn, it will be remembered, died in Cincinnati in 1879 from diseases brought about by deprivations resulting from squalid poverty. He often went hungry for days because he had not a cent with which to buy bread. While engaged in teaching chemistry in the Cincinnati College of Medicine and Surgery, he fared very well, for the then Faculty of the College attended to paying his board in a respectable boarding-house and to clothing him. They paid him money besides; but he expended his money with no more exercise of judgment than a ten-year-old spendthrift boy would exhibit. But

when a reorganization of the Faculty of the College took place, poor Vaughn, influenced by *some friends*, declined to resume the occupancy of the Chair of Chemistry, and soon began to suffer the pangs of hunger. He was too proud to beg nickles from his *friends* with which to buy something to eat, and it never occurred to them that he needed anything to eat so long as he did not complain of being hungry. They knew that, under the circumstances, he was not earning anything, and saw him daily on the streets ragged and dirty, and presenting every appearance of suffering the greatest poverty, yet they ascribed his wretched appearance to his eccentricity, and never thought that a pinched stomach and want of money to buy clothing and pay wash-bills had anything to do with it. Of course not, for how can a person know that a particular individual is starving if he does not inform him of the fact. The fact that, by a process of reasoning, the information could be acquired is not enough. He should down with his pride and say that he is hungry.

When poor Vaughn died, and his poor, emaciated frame (it could not be called a body) was put under the ground, a number of zealous friends sprang up. He left behind a miserable old trunk, which, although it was said to have a sort of lock, had to be tied around with ropes to keep it from falling apart. Some of his *friends* suspected that this old, rotten affair contained valuable papers, and a race was made by two or three parties for the office of the Probate Judge to secure the appointment of administrator. Those who did not succeed set forth their grievances in the papers of the city. The quarreling ran high for some time. Finally, after much delay, the old trunk was opened in the presence of a number of persons. But, instead of there being found large rolls of valuable papers in it, nothing was discovered but a mass of old rags. What had become of the valuable papers no one has been able to ascertain. For a number of years before Vaughn died he had frequently stated that he had a great deal of manuscript on various scientific subjects that he would publish, but he had no money with which to meet the expense. He could easily, no doubt, have secured the publication of any work he had written, without being under the necessity of advancing money, but he really did not have the ability to enter into negotiations with publishers, and he had no enthusiastic friends during his life to aid him.

After the lapse of nearly ten years from the decease of Prof. Daniel Vaughn, some real friends of the eminent scientist have taken steps for the erection of a memorial bust of him. In a late issue of the Cincinnati *Enquirer* appeared the following announcement:

"Only as far back as 1879, when the eminent scientist, Professor Vaughn, died in this city, one of our resident artists, the sculptor Mundhenk, produced from a death mask taken for Dr. Will Taft, dentist, a magnificent bust of Vaughn in bronze. It was placed on exhibition in Robert Clarke & Co.'s book-store, where it attracted the attention of the many admirers of the scholarly old recluse, whose name adorns the history of his adopted city, and gathered around it the quiet yet enduring honors always paid to the scientific.

"There is no name associated with the history of Cincinnati, Dr. Daniel Drake's alone excepted, more illustrious than that of the old star-gazer, Vaughn. He was preëminent as a mathematical astronomer, and his attainments in almost all the branches of pure science were extraordinary. Personally he was obscure. He was averse to prominence and shrank away from the merest approach of people he did not know. To the few he knew he opened his heart with the simplicity and trustfulness of a child.

"Vaughn was a great man, and brought honor and renown to the city. He was without family or posterity. The city owes him a debt of gratitude, and, as poetic justice will have it, one of his admirers is a lady whose gratitude toward his memory takes at this time the form of an earnest effort to obtain possession of Vaughn's bust and give it to the public in perpetual trust, a pedestal being already prepared for it in the beautiful public room of the Public Library. A few hundred dollars is necessary for this purpose, not to exceed five hundred, and the lady who has the project near her heart will head the popular list of voluntary subscriptions for the purpose. Any sum of money will be gladly received, and as a convenient method of accumulation the money can be sent to Mr. A. W. Whelpley, Public Librarian, who will keep the list open for subscriptions. Send in the dimes or dollars for Vaughn's Bust Fund."

The American Rhinological Society.—The Secretary of this Society, Dr. John North, of Keokuk, Iowa, writes

us that it will hold its sixth annual meeting at Cincinnati, September 12th, 13th and 14th.

The fifth annual meeting was held last September in Washington, D. C., when the following officers were elected: President, Dr. C. H. Van Klein, Dayton, O.; First Vice-President, Dr. R. S. Knode, Fort Wayne, Ind.; Second Vice-President, Dr. A. G. Hobbs, Atlanta, Ga.; Secretary and Treasurer, Dr. John North, Keokuk, Iowa; Librarian, Dr. N. R. Gordon, Springfield, Ill.

The proceedings of the Society consist of discussions of diseases of the nasal passages, and such other diseases as are sequences of them. Membership is made up of Fellows, Corresponding Fellows and Honorary Fellows. The Fellows are limited to sixty in number; the Corresponding Fellows to twenty; the Honorary Fellows to three American and nine Foreign.

A physician desiring to become a Fellow must submit to the Council, at the same time with his name, a paper written on some subject that promotes the object of the association. He must be proposed to the Council by two Fellows, and on recommendation of the Council, shall be nominated at the first session of the annual meeting. The election shall be by ballot. A three-fourths affirmative vote of all the Fellows present shall be required to constitute an election.

Disposition of the Balance.—Recently the Committee of Arrangements that had been appointed by the members of the medical profession of Cincinnati previous to the meeting of the American Medical Association in this city, in May, for the purpose of arranging for the entertainment of the members of that body, met at the office of Dr. W. W. Dawson for the purpose of presenting their report and making a final settlement. It will be remembered we stated that it was estimated that the cost of the meeting of the Association, to be met by the profession of the city, would be in the neighborhood of ten thousand dollars, and that it was the wish that the whole amount of this sum should be contributed exclusively by the members of the regular profession. We are happy to announce that the Committee reported that the contributions from the members of the regular profession were so liberal that there was no necessity to seek for a dollar from other sources, and, consequently, not a dollar was received from other than a regular physician.

The Committee were gratified to find that after paying all bills there remained a balance of five hundred dollars. Dr. C. G. Comegys moved that the balance be donated to the Humane Society of Cincinnati (S. P. C. A.), which was unanimously agreed to. Dr. Comegys also moved a vote of thanks to the profession of Cincinnati for their liberal support of the Committee in their efforts to entertain the Association. Carried. A vote of thanks was moved and carried, to Dr. W. W. Dawson, the presiding officer, for the exceedingly happy manner in which he had guided the proceedings of the Committee, and for his repeated hospitalities.

THE DISEASE OF THE LATE GERMAN EMPEROR.—The report of the German doctors of the late Emperor Frederick's case, it is said, has caused an immense sensation in England.

Dr. Bergmann, in his report, says that as early as May, 1887, he wanted to open the patient's larynx and excise the growth on the left vocal chord. A small operation promised the best results. Of seven such operations which he performed in Berlin, all were successful. There was then no question of the total extirpation of the larynx. The operation would neither have endangered the life of the patient nor would it have destroyed his voice, although it would have left it hoarse. At that time, in an intelligible voice, Frederick said: "Dr. Bergmann, this tumor must be removed. If it can not be done on the inside, cut from the outside." Everything was ready for the operation when the plan was vetoed by Dr. Mackenzie, who repeated his assurance that after a few weeks of his mild treatment the patient would recover his voice and be able to command the autumn military maneuvers.

While Frederick, the then Crown Prince, was at Ems, on the 18th of May, 1887, Drs. Von Lauer, Tobold, Wegner, Schroeder, Bergmann and Gerhardt consulted over his case and agreed that his disease was cancer in the throat. The patient was informed of the nature of the disease and consented to having an operation performed, the physicians having decided that there was no danger, and that all the conditions were favorable for a successful operation. Dr. Bergmann had already performed seven similar operations, all of which had been successful. On the 20th everything was in readiness for the operation, which was arranged for the following morning. That evening Dr. Mackenzie

arrived and was admitted to the presence of the royal patient. The English doctor glanced at the Prince's throat, and pronounced that there was no cancer there. On the strength of his positive opinion the Prince refused to permit the operation, and thenceforth Dr. Mackenzie took full charge of the case. "Later," Dr. Gerhardt says, "we saw the cancer growing, while a harmless powder only was being applied."

In November, 1887, Dr. Schroeder decided that the disease was cancer, and that only the extirpation of the larynx would save the life of the patient. The matter was left to the Crown Prince, who decided that he would not submit to an operation. The only inference to be drawn from these statements is that the German doctors believe that if the operation had been performed at first, Frederick might still be alive. The Germans throw the entire responsibility of the Emperor's death upon Dr. Mackenzie. The latter refuses to be interviewed.

The *Freisinige Zeitung* says: "The report on the late Emperor Frederick's malady leaves the impression of being a partisan statement rather than a scientific medical opinion, as it does not contain the opinions of the English physicians or their German adherents. Even the most partial reader can not acquit it of one-sidedness.

We have seen the statement that if the report of the German physicians be accepted as true a great revulsion of feeling toward Dr. Mackenzie will be the result; but his report that he has promised is awaited before any real opinions are expressed regarding this, perhaps the greatest medical controversy of the present time. Many will doubtless regard the German report as inspired by jealousy and malice, and, as far as England is concerned, Dr. Mackenzie will still be the recipient of honor. In Germany it will be quite different, and the English doctor's name will be regarded with loathing.

Early in 1887 Dr. Gerhardt states that, on examination of Frederick's throat, he pronounced the disease cancer. Dr. Mackenzie afterward pretended to remove a portion of this part, which he submitted to Virchow for examination, who pronounced it not cancer. Dr. Gerhardt subsequently made an examination of the Prince's throat, and ascertained that the part removed by Dr. Mackenzie was from the unaffected portion of the throat, and not from the diseased portion.

Dr. Cornelius R. Agnew.—At the last meeting of the Ophthalmological and Otological Section of the New York Academy of Medicine, the following motion was made and carried:

"That a committee be appointed, of which the chairman of the section, Dr. David Webster, be a member, whose duty it shall be to obtain a good photograph of the late Dr. Cornelius R. Agnew, for the purpose of having engravings, suitable for framing, made from this. The right of issue and sale of such engravings shall be given to some first-class publisher, if practicable; if not, the committee shall offer them to the profession at one."

In accordance with the above, a committee has been appointed. Members of the profession who desire such an engraving, accompanied by an autograph signature, should send their names and addresses to the secretary of the committee, Dr. Charles H. May, 640 Madison Avenue, New York City, at once. When all such names shall have been recorded, those who have requested a copy of the engraving will be notified of the cost of the same, either by the publisher or by the committee having the matter in charge.

The New York Academy of Medicine is forty years old, and has nearly five hundred members. It has a library of thirty-seven thousand volumes and twenty thousand pamphlets, and a free reading-room with nearly all the medical journals of the world. It owns its present building and some $100,000 worth of property besides. A new fireproof building is greatly needed, and an appeal is made to the public for the means to erect one at a cost of $250.000.

The Megascope: What It is and for What Purposes It is Used.—At the laboratory of Dr. Charles M. Cresson, in Philadelphia, last week, a private exhibition of the megascope was given to a number of gentlemen. It is used as a microscope for the purpose of presenting enlarged views of writings, engravings, etc., and is especially adapted to discovering forgeries and counterfeits. Unlike the photographic enlargements of documents, the use of this instrument permits the direct examination of the original paper under any desired magnifying power, and it insures the correct use of the magnifying lenses which are employed.

The megascope consists of a large achromatic and aplanatic lens about seven inches in diameter and of over two feet focus, placed in front of a platform upon which the writing or engraving to be examined is securely fastened, and kept flat by means of a plate-glass cover. The document is illuminated by oxy-hydrogen lights placed on either side, having condensers arranged so as to concentrate the light upon the paper. Examinations can be made by a single observer, by looking through the lens at the illuminated paper. To enable many persons to observe and examine simultaneously, a large plate-glass screen, lightly ground upon one side, is placed in front of the lens, so as to intercept the rays which are reflected from the illuminated writing through the lens. In this way, enlarged images of objects and writings, free from spherical and chromatic aberration, can be obtained. In this instrument the parts are fixed, and no disturbance of the relative distances can occur; and the usual inconveniences and distortions caused by improper or ignorant use of the ordinary magnifying-glass are avoided.

Wm. R. Warner & Co.—Wm. R. Warner & Co. have issued the following notice to physicians:

"We take this method of denouncing the circulation of certain erroneous reports as being the outcome of ignorance or malice.

"We have no connection with the firm of H. H. Warner & Co., of Rochester, who make "Safe Remedies" and other patent medicines.

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Original Contributions.

Influence of Diet on Health and Certain Neglected Tissues.

W. I. THAYER, D.D.S., M.D., BROOKLYN, N. Y.

"THE first duty of the physician to the public being the prevention of disease, there can be no more important subject for our consideration in this connection, than the influence of diet upon health; and none can more fuliy appreciate this factor than the physician, who is constantly studying the causes of diseases and their probable prevention.

"It is universally admitted that the great majority of non-contagious diseases are due to mal-nutrition; and this is largely occasioned primarily by errors in diet, which would be preventable through a knowledge of the relative value of foods as nutrients, and of their requirements for digestion." —*A. K. Hills, M.D.*

Not only patent, "non-contagious diseases are due to mal-nutrition," but there are certain lesions brought about "by errors in diet," that have never, or to a very limited extent, been even considered by the profession; not to say, having done anything to prevent the wholesale destruction of the petrous tissues. Some may consider that to give any attention to such matters is beneath their mental application, and relegate it to another set of professionals. This is believed to be wrong upon the ground that he who accepts the holy office of a physician, is in duty bound to conserve in every way possible the public weal—especially to consider what is for the best interest of his immediate patients; very few are they who do not do this.

Any one who has been observing at all, for the past few years, must have noticed how much more rapidly teeth decay of late than they did thirty or forty years ago.

If the teeth are valuable to continue the beautiful contour of the features, useful to assist in the articulation of words, and necessary to masticate the food, then their preservation is of the highest importance. But, on the contrary, if the writer has overestimated their worth for these purposes, then the subject is hardly worthy of any extended consideration.

Almost every region of the body has received at the hands of the physician careful hygienic and curative treatment, save the petrous tissues. These they have permitted to "take care of themselves," as best they may, and when these feeble tissues could no longer stand up under various untoward influences, recommended that they "be stuffed." We beg to submit how different the results, had they—the teeth—been "stuffed" when building, *not* afterward.

To-day human teeth decay and waste away, much like the dew before the autumnal sun. Pulps become exposed, nervous mass aches, pulpitis, periostitis—"have 'em out!" Artificial teeth, glass eyes and false legs are poor exponents of the better originals.

How are physicians to prevent the decay and loss of the teeth? This is the province of the dentist. Assist to build so that there will be but little to repair. Then the latter profession will have all they can attend to.

The exact facts are that people, the younger portion, are *starving their teeth out.* No fœtus could form without material from which to form. Every fœtal tissue has been supplied, more from accident than studied thought, with appropriate pabulum, *except the teeth.*

Good, strong, hard teeth contain in their average construction eighty-two per cent. of the inorganic constituents; enamel, ninety-eight per cent.; dentine, seventy-eight, and cementum, seventy per centum. Few children can be found who have all of their six-year molars, the first permanent teeth, at ten years of age. At twelve and fourteen, how many are there, whose bicuspids and incisors are found to be unaffected by caries? Few! The *lime salts* in their teeth will not average sixty per cent., and the soft-solids fully forty per cent. It is within the superintendence of the profession to correct this thing.

If no food is eaten, *no* tissue could build up, and all tissue

would die. The calcareous salts are not fed to the fœtus, babe, child and youth as they should be. These salts *can not* come from a promiscuous food in the sufficient quantity demanded, but from the specially prepared cereal foods. It must be from the *whole* of the wheat, the corn, the rye and the oats. The immediate outside of all of our grains is rich in the carbonate and phosphate of lime, and other salts that are so put together as to be *easily separated* by the process of digestion as *no* other food is arranged, so that they can be *easily* and *eagerly* APPROPRIATED. Appropriation exhibits *favorable results*.

The strong and pointed statements of Dr. Hills, at the State Sanitary Convention, held in Philadelphia in 1886, are very true in many ways. We beg to submit, if they are not so, in regard to teeth; and if the welfare of the petrous tissues is not neglected by the profession as a whole.

The time to commence to build up the teeth is as early as the sixth week of gestation, because they commence to form thus early. The mother should eat liberally of the coarser bread foods, three times a day. Also, if she nurses, to so continue. If a wet-nurse—a wet nuisance—is employed, she ought to be watched, so as to know that she partakes of these indicated foods.

While it is believed that the most suitable pabulum for an infant is human breast milk, yet there are thousands of children whose petrous tissues are being starved by *not* receiving proper nutrient matter from such a source. The writer, after no small experience, believes that a really *well-balanced* and *easy digesting* artificial food for infants, is vastly superior to indifferent maternal nursing; not only believes, but knows, that it is. But it depends entirely upon what goes into the bottle. It must be some better charging than would be the case with distilled water and starch.

Water is as necessary an article of food as can enter into any organism. Babies and children require water very frequently. Many times infants cry to be fed when they are not hungry, and only require a little water to moisten the lips and mouth and quench their thirst. In some cases children are overfed, through the sympathy of the mother or nurse, and require instructions from the physician.

Starches, as such, never ought to go into the nursing-bottle.

Starch is not digested in the stomach, but in the duodenum and intestinal tract. The amyolytic ferments of the pan-

creatic and intestinal juices are not secreted in sufficient quantity in infants, to digest starch. Hydro-carbons, in the form of starch, will burn in the digestive apparatus of such patients, establishing diarrhœa and other bowel difficulties.

Malts, maltine and maltose are inappropriate ingredients in an infant's artificial food, however well borne by invalids. They, together with cane-sugar, undergo in the stomach a fermentation, when they come in contact with the lactic and hydro-chloric acids, becoming vinous or acetous, and produce heat, gastric erosions, and when this soured pabulum enters the duodenum and lower digestive tract, they rasp their way along, establishing blennorrhœa, diarrhœa and entero-colitis. This can not take place if the carbo-hydrates—starches—are converted into *dextrine*.

The starches should be converted into dextrine by baking them, at a temperature of 350° F., for some eight or nine hours. Dextrine passes through the stomach unaffected by the contents of that viscus, and enters the first gut in prime order to be dissolved, converted into maltose or soluble sugar by the amyolytic ferments, and ready for *immediate* absorption; and when in the circulation, are ready for appropriation where needed.

Many children are brought up on cows' milk, but, with more or less trouble, owing to the tough casein in such food. The casein in cows' milk is not as flocculent as it is in woman's milk, and is apt to form in curds, especially in summer and warm weather. This can be wholly overcome if the nurse will partly predigest with pancreatine. Yet, few are capable of doing it. Too much time will make the milk bitter. Too much heat will ruin the ferment, and the milk be but little, or not at all digested, and the child's digestive apparatus trifled with.

If the mother or nurse can not furnish the very best of human pabulum, it is much better for the future good of the child to resort to some one of the many artificial foods now upon the market. There are some eight or more of them.

There are four important elements in human milk; they are the *albuminoids*, *hydro-carbons*, *water* and *calcareous salts*, or there *should be* of the latter.

Starches.—There are three of the artificial foods that belong to the starch group. Wells, Richardson & Co.'s, whose albuminoids are 9.05 per cent.; lime salts, 2.26; phosphoric

acid, 0.688; and ease of digestion, 8.35 per cent. Dr. Ridge's Food: Albuminoids, 8.76; salts, very low, 0.48; phos. acid, 0.260; digestion, 7.97 per cent., very difficult. Imperial Granum has of nitrogenous matter, 10.73. Tooth-builder: Lime, 0.37, and phos. acid, 0.167; digestion, 9.75 per cent.

Malts.—Two are known as "malt foods." Horlick's Food: Albuminoids, 11:30 per cent.; salts, 2.76; phos. acid, 0.421; ease of digestion, 10.85 per cent. Mellin's: nitrogenous matter, 8.34; salts, 3.00; phos. acid, 0.583; digestion, 7.38.

Milk.—Three are considered as "milk foods," which are the richest in albuminoids. Nestle's Food: 11.46 per cent. of nitrogenous matter; salts, 1.75; phos. acid, 0.630, and digestion, 11.09 per cent. Anglo-Swiss Food: proteins are 12.38; lime salts, 1.95; phos. acid, 0.800, and ease of digestion, 11.20. Carnrick's Soluble Food contains 18.22 per cent. of the albuminoids, and human milk 17.08 per cent., which are very important elements in a natural or artificial food for infants. The proportion of the lime salts in Carnrick's Food is 2.991 per cent.; phos. acid, 0.874, and ease of digestion, like that of human milk, 16.45 per cent. The last-named food is much the best balanced as a general tissue-builder, and especially for petrous tissues, for which we plead. It is certain that when a well-balanced artificial food is ingested, that will digest easy and feed all the tissues, there can be but little or no anxiety about the results for *all* the tissues, and *especially the petrous ones.*

The Flesh-worm Disease.

BY R. R. HOPKINS, M.D., RICHMOND, IND.

The public is often startled by published accounts of this terrible disease. As our literature is limited on the cause, as well as the treatment, of this malady, termed the trichinis spiralis, I thought it would not be amiss to give some thoughts on the subject, thinking, perhaps, it might do some good, as well as to draw out some literature on the subject.

I see in an article in the Annual of the *Universal Medical Science*, Vol. I., page 396, rats as an agent, in the introduc- of trichinæ into swine, or in cats who ate the carcasses of

rats. The attention of the profession was called to this disease and its cause as long ago as 1835, by Professor Owen.

Mr. John Hilton, a demonstrator of anatomy at Guy's Hospital, and Mr. Wormland, the demonstrator at St. Bartholomew's, had, two years previously, observed small, white bodies interspersed among the muscles of subjects under dissection, and that they were of a gritty character was evident from the manner in which they turned the edges of knives. One of these specimens of affected muscles was, in the year mentioned, given to Professor Owen by Mr. Paget. These white bodies the distinguished anatomist discovered under the microscope to be the capsule of a very fine worm. Later microscopists have defined them more minutely. The smallest that have been discovered were $\frac{1}{73}$ of an inch long by $\frac{1}{960}$ of an inch thick. The largest were $\frac{1}{22}$ of an inch long by $\frac{1}{640}$ of an inch thick. They belong in the class of nematoidea. As found in the muscles, it is coiled up in a cyst, containing a granular substance at first, and afterward a calcareous matter. When expelled from the cyst, the parasites are seen to be round worms, $\frac{1}{28}$ of an inch long and $\frac{1}{620}$ of an inch in thickness. From its hair-like fineness its discoverer derived the term trichinæ, and from the spiral manner in which it was invariably found coiled up within its envelope, he added the word spiralis.

The discovery made much noise at the time throughout Europe, and the professor's paper drew the attention of the anatomists of Europe to the worm. But one or two cases were recorded of the presence of the parasite in the human body, and the subject remained in abeyance for some years, until the German professors again drew attention to it, and completed our knowledge of its method of introduction and of the pathological effects. As a result of this parasite, Professor Luschka, of Tubingen, carried our knowledge of the worm, perhaps, up to its point anatomically, and in the same year the method of transmission of the worm from one animal to another was made out by a series of experiments instituted by Herbst Von Nachrichten. He gave the flesh of a hedge-hog, which he knew to be infested with trichinæ, to young dogs, and speedily found that all their voluntary muscles were full of these worms; but, although this important step was made out, little notice was taken of it. His experiments were repeated in Scotland and England, but the peculiar manner in which the worm got into

the muscle was yet undiscovered. Professor Kenker, in 1860, pretty clearly demonstrated to us the manner and the supply of this knowledge by a case in question. The body of a servant-girl, who had died with many of the symptoms of typhus fever, came under the inspection of the anatomist. He found her voluntary muscles to be full of trichinæ, and, upon inquiring into her case, he found she had assisted in the making of sausages about three weeks before she was taken ill, and that she had eaten some of the raw meat a few days before her illness commenced. The butcher who had killed the pig and several members of the family had been affected in the same manner as the girl, but had recovered. The microscope revealed, in the examination, that the hams and sausages were full of the trichinæ "encapsules;" but in the girl the worms were found to be in a free state. From this evidence, proof of the manner in which the parasite obtained entrance to the human body was fully made out. Then we will ask, why should pork only be the means of conveying the entozoa to the human body? The reason is, that the pig is the only animal eaten by man that is partially a carnivorous feeder. It is supposed that the pig obtains them from dead rats (which are often infested with these parasites), or other garbage birds, although for some unknown reason carrion-feeders can not be infested with the parasite. In the horse, the calf and the dog, badgers, hedgehogs, moles, cats, rats and mice, also, eels, they have been found in the muscles, and will convey the parasite to any animal eating the flesh of these animals. It is possible that the worm may be conveyed, like the tape-worm, through the medium of impure water. We are not likely to drink this; but it often happens that fruit and vegetables are watered from impure tanks, into which these parasites may have gotten. It is certainly an objection to the modern system of watering with liquid manure, that in this way the tape-worm, and possibly the trichinæ, may find their way on to the vegetables which we eat, and in this manner we may receive noxious, intestinal worms into our system. For instance, some people water strawberries and other tender vegetables with liquid manure, little thinking of the little serpent that may be hidden in the fruit.

It is now known that, after entering the alimentary canal, the parasite finds its breeding-ground and brings forth immense numbers of its young, which immediately begin to

make their way through the coats of the intestine and migrate into the muscles. Again, it is a singular fact that these disagreeable adventurers nearly always select the voluntary muscles, or those which are moved at our will. The heart and kidneys and those parts of the viscera which act independently of our will are scarcely ever affected, although it is a matter of dispute how the parasites get distributed so generally through the textures of the body. Some claim that they make their way directly by boring, as the ship worm bores through a piece of timber; but Dr. Thudichum, who was appointed in 1864 to investigate the subject by the medical officer of the Privy Council, asserts that they enter the circulation and are in this manner distributed equally through every texture, as well as the organized functions, of the body. To use his words, "Arrived in the capillaries, they penetrate their two-coated walls, separating the fibres as a man separates the branches of a hedge, when creeping through it, and are now either at once in muscular tissue, their proper feeding-ground, or get into inhospitable tissues and cavities, and there either perish or escape from them by a renewed effort at locomotion, enter the circulation a second time, and ultimately perish in the lungs, or arrive in some muscle to obtain a late asylum." This hypothesis is certainly reasonable, as it is an agreement with the known means by which other entozoa migrate. Arrived at the muscular tissues, it seems again questionable whether the parasite attacks the muscle only, or whether it is not deposited in the intervals which occur between the bundles of muscles. Leuckhart says they penetrate the sarcolemma and destroy the muscular fibre itself. Dr. Thudichum says that he has never seen but once the worm in the muscle, but always outside of it.

It is certainly a strange fact that, in many cases, persons attacked with trichinæ have not only perfectly recovered from its effects, but have become as strong as ever. It could scarcely have happened that the muscles of these patients had been fed upon by vast colonies of parasites, which would have inevitably destroyed them beyond repair. The probability is that the parasite finds its way into all the tissues between the third and fourth week after immigration. The trichina has become full-grown, and now it begins to prepare its capsule. It becomes fixed to the spot in which it is; solid matter is deposited around it, and, curled up, it lies immovable in its plastic capsule, and dies, unless received

again into the alimentary canal of another animal, which, in this case, of course, it never does. The presence of these encapsuled trichinæ in the muscles may cause irritation; but speedily subsides, and it is pretty clear that many persons suffer little harm from them whilst thus curled up, as they have been found in the bodies of subjects that have been dissected, and whose previous history gave no evidence of their existence. On the other hand, the disease, when severe, puts on many of the characteristic symptoms of well-known diseases. The fever, caused by the presence of the parent worms in the intestines, may be, as, indeed, it often has been, taken for gastric fever. Then, again, when the young are immigrating into the muscles, the most excruciating agony seizes the patient. He can not move a muscle without the utmost pain, and he lies generally upon his back, with legs a little apart, covered with perspiration. The face and neck become tumid with a dropsical effusion, which gradually extends to the legs and abdomen. An attack of acute rheumatic fever appears to have seized the individual, but for the want of heart symptoms, we are left in doubt in regard to the diagnosis, and, no doubt, many of our arthritic troubles with joints, as well as unclassified diseases, are due to this cause.

Again, the disease stimulates cholera and typhus, and, indeed, poisoning in many of its symptoms, but those who have seen a case of genuine trichinosis in its acute attack, can not be well deceived, as the whole symptoms present are consistent with no other disease. The agony caused from this plague of parasites, attacking the fine fibres of nerves distributed throughout the frame, and the congestion and inflammation of the great nervous centers, can from this estimate be thoroughly understood in the fever and weakness caused by the destruction of fibre, both muscular and nervous. As a result the irritation and fever is accounted for with equal ease. The sequelæ from this disease are many in my judgment. Many of our chronic intestinal troubles, and the host of chronic diseases, both nervous and muscular, that we now have to contend with, result from this disease. Its original acute attack might, or might not, have been recognized, as we may have it from a mild form to the most severe. In its mild form it may leave a severe sequela, from the ravages it has made on the nervous or muscular system. In this disease we should look well to the sympathetic nervous system, as well as to the lym-

phatic systems. In the progress of this disease during the first stage, which lasts from a week to ten days, there are great intestinal disturbances, caused by the presence of the parent trichina in the intestines, giving rise in severe cases to alarming diarrhœa. The second stage lasts a fortnight or three weeks, seldom longer. During this time the immigration of the young trichinæ, hatched in the intestinal passage, is taking place. Hence, the agony throughout the body, the dropsy in the face, the hurried breathing and the fever. The dropsy becomes genuine. In the fourth week immigration has entirely ceased, and the parasite beginning to be incapsulated. From this time the patient begins to recover, the appetite improves, the pain becomes less, and, unless complications arise, as in other severe fevers, the patient gradually passes into a state of convalesence. Death may, however, take place at any stage of the disease. At the great outbreak of this disease, which took place at Calbe, in Germany, it was observed to happen on the fifth, eighth, fourteenth, twenty first and forty-second days of the illness. Death generally is brought about by exhaustion; the exhaustive diarrhœa which sometimes occurs, together with the inability to take food and the terrible agony, easily explain this termination. Again, it may settle into a chronic form, or it may be ushered in, in a very mild form, and slowly emerge into a chronic form and undermine the health and functions of the organ by producing an organic disease. When an organ or organs become affected, they sympathetically derange the functions of other organs; also, the ganglionic centers become affected.

The difficulty connected with the treatment of this disease, is consequent upon the impossibility of knowing what is really the matter, in its early stages, when the treatment alone is useful. In regular outbreaks of the disease, the physician is led to suspect the evil in the beginning, and then it can be cut short by destroying and expelling the parent worms before they have time to colonize the intestines with their young. But at the commencement of an outbreak, or in isolated cases, the symptoms are so much like those of gastric fever, as to lead to a suspicion of the real nature of the affliction, opium and mercury. When the parasites are free in the bowels, before they migrate, clinical experience has yet to ascertain what toxical anthelmintics are best suited to destroy this parasite. Prof. Mosler's method of treatment is to have a mixture consisting of two drachms of benzine, an

ounce each of licorice juice and mucilage of gum arabic, and four ounces of peppermint water. Of this mixture a tablespoonful is to be given every one or two hours. I have found this to be a very fine remedy. See Austin Flint's "Principles and Practice," page 525, edition of 1873. After the parisite has migrated from the intestine, then tonics and stimulants are required to support the system with nourishing diet, as recovery now depends on our support and the ability of the system to endure them until they become encysted. We must palliate pain, restore disordered functions and support life. If any functional or organic diseases result, they must be treated under their respective heads. Prevention is far better than cure.

As pork is generally the means by which the parasite enters the human being, we ought to be very careful that it is thoroughly cooked. The severity of the infection depends upon the amount of cooking to which the trichinous meat has been subjected, and the order in which it is affected is as follows: Raw meat, smoked sausages, cerveted sausages, raw smoked ham, raw smoked sausages, fried sausages, fried meat balls, brawn pickled pork, blood sausages, boiled pork. As few people are likely to eat raw pork, there seems little danger to be apprehended from the most dangerous item in the list, but it is well to know that boiled pork is in all cases the most harmless. The power of the parasite to resist heat and cold is very remarkable; they have been frozen to five degrees below centigrade, and have been thawed to life again. Ordinary vermifuges are powerless against them; their vitality is as great as that of the wheel-worm, which seems almost indestructible. We must, then, be always on our guard in regard to underdone pork; also, beware of German sausages, sausages raw or smoked, as we would beware of an assassin. Before the discovery of this disease, trichinosis, several epidemics occurred in Germany, which very much puzzled the physicians. In several of its first outbreaks it was thought to be mysterious cases of poisoning, and judicial inquiries were made in regard to it. I have often thought that the terrible scourge of dysentery in Eastern Kentucky, I think in the fall of 1884, was due to this parasite, as one trichinous pig is sufficient to cause an epidemic far and wide. Indeed, many of those which have ravaged Germany within the last several years, have been traced to one trichinous pig. If certain epidemics can be traced to the action of an obscure microscopic parasite, may

we not hope that many of our disorders, now obscure in their origin, and consequently unmanageable, will in time come to light and be amenable to treatment? Possibly some more subtle power even than the microscope will be discovered, as this is a great age of progression and invention, that will give the power of scrutinizing diseased conditions and finding out the agents so stealthily at work in bringing the human machine to misery and premature death.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

GIGANTIC UTERUS—ITS ACCIDENTS AND ITS TREATMENT. BY PROF. POLLAITON.

There is a certain malady of the uterus which is generally confounded with myoma, or fibro-myoma, of this organ, and which it appears to me decidedly advantageous to distinguish from the latter. I refer to total hypertrophy of the uterus in a state of vacuity.

This malady appears from unknown causes in women about the thirties, and disappears very probably after the menopause.

The disease is characterized anatomically by a regular hypertrophy of all the elements—fibres, vessels, mucosa—which form the uterus, with this striking peculiarity, that the uterine cavity increases in size in proportion to the augmentation in thickness of its parietes. The uterus acquires gigantic dimensions whilst conserving its normal shape. This condition can not be better designated than *gigantic uterus* (le gigantisme uterine).

The annexes, ovaries and tubes remain in their normal state. They do not participate in this hypertrophy.

The functions of this very large uterus take on very readily the characteristics of morbid phenomena. In the mild cases, which appear to me to be of frequent occurrence, the menses are characterized as an almost continual flow of a sero-mucous fluid, more or less abundant. Sexual intercourse becomes more difficult, not because it is painful, but because it frequently gives rise to small hemorrhages. Finally, in the more advanced form, the menses are veritable grave menorrhagias, last fifteen to sixteen days, and

only cease to give place to the sero-mucous discharge above mentioned.

Coitus, walking, the jolting of a wagon, are at this period almost certain to provoke fresh hemorrhages. The patients complain of pain in the lower part of the belly, and are inclined to ascribe their sufferings to a tumor, which sometimes attains the volume of a pregnancy of five or six months' duration.

A giant uterus, the cavity of which is ten to twenty times larger than that of the normal organ, throws out at each menstrual epoch a quantity of blood disproportioned to the forces of the woman so afflicted. The result thereof is, in mild cases, a more or less enfeeblement of the woman, and, in grave cases, an anæmia which may progress to death.

A uterus hypertrophied to the point of forming a voluminous tumor and threatening the life of the patient, is an affection which I believe very rare.

The symptoms which permit of the recognition of this condition are:

1st. The presence of a regular, uniform tumor, resembling very much a pregnancy of the fourth, fifth or sixth month, a tumor which augments in size during the menstrual period, and which undergoes a sort of retraction in the interval between the menstrual epochs.

2d. Periodic hemorrhage coincident with the menstrual epoch.

3d. A sero-mucous discharge in the interval between the menstrual epochs.

4th. An enlargement of the uterine cavity both in length and breadth.

Independently of these special symptoms, the hypertrophic uterus can be distinguished from myoma or fibromyoma by the regularity of its form, and by its consistency, slightly elastic, less hard than that of a fibrous body.

The menopause puts an end to the hemorrhages of uterine hypertrophy. But these hemorrhages are sometimes so serious that it is not alone not prudent to temporize until this period of arrest of the menses, but intervention is imperatively demanded.

Three separate means are at our command to effect the retrogression of the uterus, and, consequently, to combat therewith the hemorrhages. These are ergot, electricity, removal of the ovaries.

Ergotine, internally, or by hypodermic injections, or injected into the parenchyma of the uterus, succeeds ordinarily fairly well in moderating the abundance of the menstrual flow, and in thus enabling the patient to reach the curative period of the menopause. In grave cases, however, ergotine is only an insufficient palliative.

Electricity in the form of continued currents, applied directly to the uterus, appears to me useful in producing a retrogression of the hypertrophied tissue. It is well known that electricity has but an uncertain influence upon the retrogression of veritable fibroma. But it is otherwise with tumors formed of elastic fibres, and particularly with hypertrophy of the uterine parietes. The continued current should therefore be tried in the affection under consideration.

If the hemorrhages resist the action of ergotine and of electricity, if the life of the patient be in danger, we must then resort without hesitation to Battey's operation.

Since the cessation of the ovarian functions entails, at the critical age, the suppression of the normal menses and of the pathological discharges dependent upon the hypertrophied condition of the uterus, it is logical to conclude that the oblation of the ovaries, by producing a precocious menopause, will give the same results. Duplay and Lawson Tait recommend this operation for all uterine tumors with incoercible hemorrhages. It does not always succeed in the cases of fibroma; but in hypertrophy its effect is certain. It acts not alone by arresting the flow of the menses and of ovulation, but also by the removal with the tubes and the ovaries of a great number of vessels, the ligation of which contributes greatly to the production of atrophy of the uterus.—*Obeille Medicale*, *Un. Med. de Canad.*

SIMPLE ULCER OF THE DUODENUM.—BY CLEROUX, OF MONTREAL.

N. D., a man aged thirty-five, of bilious temperament, of medium stature and very thin.

At the age of eight years he had confluent smallpox, and at twelve an affection of the intestines which manifested itself by violent pain in the abdomen for a whole night, and required a physician. This last malady lasted several days. Since then he has had numerous colds and several attacks of intestinal pain.

Every year since the age of twenty-five he has had violent attacks of colic, supervening upon changes in his alimentary regimen, especially during a stay of several days that he made in the country.

This man ate abundantly of meats, but took no alcohol. Digestion was accompanied by some flatulence, sometimes a little diarrhœa, never vomiting; never had a severe burn, no syphilis; in a word, no hereditary morbid antecedent.

Saturday, November 18th, at 4 A. M., after a very plentiful supper and a good night's rest, D. was suddenly taken with most atrocious pains in the abdomen.

At the time I was called, being detained by another patient, and thinking that his suffering might be charged to an indigestion, I prescribed a laxative. After about an hour I went to D., and found him suffering from severe pain in the right hypochondrium, which radiated into the left, and into the whole abdomen. Continued pressure afforded some relief.

Three ounces of castor oil were taken, then a dose of cascara sagrada, then a large injection, all without effect.

I made a rectal examination, and found no obstruction. The temperature in the rectum is 99°; pulse 90.

Two hours after the injection, I ordered morphia (one-half grain every hour). The first dose diminished the pain considerably. It was only now that I could examine the abdomen—even then but superficially. I note a strong tension of the abdominal walls, normal sonorousness and sensibility in the epigastric region and in the left and right lumbar regions. Further pressure upon the last-named region produces paroxysm of pain almost as severe as at the outset.

Urine normal and flows readily. In the evening at eight, temperature 100.5°, pulse 105; 19th, at 8 A. M., temperature 102.5°, pulse 115, small and hard. Same tension of abdominal walls; they are sensitive to the touch; no tympanitis; profuse sweating.

The symptoms are sufficiently marked to permit of the idea of a peritonitis by perforation. Treatment is continued by the use of morphia in quieting doses.

The 20th and 21st the symptoms became more severe; fecal vomiting for a whole day; finally, death on the 22d.

Post-mortem Examination.—On opening the abdomen, a liquid holding fecal particles in suspension is seen to flow out in abundance into the right lumbar region, from a small

orifice in the duodenum. Old adhesions unite the stomach and some loops of intestine to the abdominal wall. As was easily foreseen, the peritoneum lining the abdominal walls in the epigastric region, the right and left hypochondrium, the stomach, the liver and the intestinal loops, is covered with a thick, white, fibrous layer. The naked eye does not discover any pus. The rest of the peritoneum is congested, and does not contain any fibrous or serous exudate, unless it be the liquid escaping by the small orifice from the duodenum.

Examination of the mucous membrane of the stomach and duodenum discloses nothing abnormal except the round ulcer which had given rise to the perforation. This ulcer, perfectly round, with smooth edges, as if made with a punch, of a bluish-black color, with a diameter of three lines, is situated in the superior and horizontal part of the duodenum. Around this ulcer there is a slight tumefaction of the mucous membrane, with induration, of the size of a twenty-five cent piece.

The channel of the intestine is free throughout its whole extent.

We may now ask the question: At what time was the diagnosis of the case possible? I confess that I was not able to make a diagnosis at the outset; it was only when the peritonitis by perforation became evident, did I suspect, by reason of the seat of the pain, that duodenal ulcer might be the cause.

It is true that the history of the patient reveals some of the symptoms of the malady, but none were pathognomic. Thus it is very probable that the attacks of colic coming on every year, as also the digestive troubles, were due to the presence of ulcer of the duodenum. The seat of the pain felt by the patient is the seat of the ulcer; but it is important to know the moment when this pain sets in, in ulcer of the duodenum. This occurs almost always two to three hours after the ingestion of the food; that is to say, at the time when the alimentary matters, still acidified by the gastric juice, come in contact with the mucous membrane of the duodenum. In our case, the patient could give no account as to the period, in relation to his meals, of the setting in of the paroxysms. However, his last attack came on eight or nine hours after he had taken his supper. The causes invoked in the pathogeny of ulcer of the duodenum, as alcoholic excesses, internal traumatism, burns, tubercu-

losis, are all wanting here, as also a very important symptom, viz., intestinal hemorrhage. This may occur without being observed. However, this hemorrhage, which is most frequently sudden and abundant, throws the patient into a condition of anæmia marked, not alone by excessive pallor, but also by great feebleness; by cold sweats, etc. Furthermore, intestinal hemorrhage is very frequently accompanied by hematemesis, which also was absent here.

In resume, there are three orders of phenomena, which, in their ensemble, enable us to make the diagnosis: 1st. Intestinal hemorrhages. 2d. Pain. 3d. Digestive troubles. The first and most important is altogether wanting; the second is incomplete; the third exists, but is of but little interest, especially as it is isolated.—*Union Med. d'Canada.*

ZOÖPLASTIC GRAFTS.—GRAFTS OF CHICKEN SKIN.

A communication to the Biological Society, by P. Redard, Surgeon to the Dispensary Furtado, Heine.

The animal grafts investigated and studied by Czerny, Coze, Follet, Houza and l'Aulnot, had been almost generally abandoned in surgical practice.

To-day, however, a reaction in their favor has set in, and Petersen, Baratoux, Dubousquet, Laborderie, have shown the possibility of overcoming a considerable loss of substance by the transplantation of the skin of frogs. Assady, Fargin, Monod, Peyrot, have obtained excellent results from grafts of tendons on animals of different species.

We ourselves have obtained excellent results from grafts made from chicken-skin, and we believe it useful to note these results, which interest both the physiological and the surgical sections of the Society.

We have nowhere found, in our researches, observations of grafts of chicken skin on a human wound, placed there with the purpose of hastening reparation and cicatrization. Wiesman has transplanted, twice, the skin of a pigeon to a pigeon, and with success; three times the skin of a chicken onto a chicken, with two adherences and one failure. Dieffenbach claims to have made successfully a great number of grafts on birds. G. Martin, in his thesis, reports the excellent results of his experiments in transplanting the skin of ducks and of pigeons onto birds of the same species.

In the cases of extensive wounds, we have obtained a rapid regeneration, thanks to the transplantations of chicken skin; especially so in a case of profound burn of almost the

entire hairy scalp, and dating back eight months, in a child of about two years of age.

No reparation had occurred during this whole time, and the abundant suppuration weakened the patient and threatened her life.

The transplantation of grafts of frog skin not giving sufficiently rapid results, we transplanted chicken skin, and in two months obtained a reparation of the skin of the skull to the extent of seven centimeters antero-posteriorly, and eight centimeters transversely. In other instances we have obtained similar results.

We believe that the grafts from the skin of birds, and more particularly from the skin of the chicken, are to be recommended. The skin of the chicken is supple, fine, vascular, spreads out readily upon the surface, adheres without being reabsorbed, forming important islets of epidermis, which, in developing and spreading, form new tissues, supple and differing greatly from the ordinary cicatricial tissue.

We shall study later on the histological modifications undergone by the grafts from the skin of birds, and seek for a theory for the phenomena of reparation observed. To this day, authors have given but incomplete information on this important subject.

The operative procedure employed by us in these transplantations is very simple. The skin must be taken from beneath the wing of young chickens; it should be deprived of its cellular tissue, and should not contain any fat. The transparent pieces should be from one-half to one centimetre in size.

Sutures are not needed, as the skin adheres very easily, and does not become displaced. The wound should be rendered aseptic, and the dressing put on with the greatest care.

Iodoform gauze, with a layer of cotton-wool slightly compressive, seem to us sufficient to keep the grafts in place. —*Gaz. M. de Paris, Un. Med. d'Canada.*

TREATMENT OF HYDROCELE BY INJECTIONS OF CHLORIDE OF ZINC, ONE TO TEN, WITH OR WITHOUT PRELIMINARY EVACUATION.

This process, which forms the subject of the thesis of M. Lerond, was devised by Polaillon in 1879, and recommends itself by the great simplicity of its execution, and by the benignity of its consequences. If the hydrocele is voluminous, of the dimensions of two fists, Polaillon relieves the

tunica vaginalis of the liquid it contains, and the next day, or the following days, he injects, drop by drop, one gramme of the solution, of one to ten, of chloride of zinc. If the hydrocele be of lesser dimensions, the surgeon withdraws several grammes of the fluid, and injects immediately thereafter a syringeful or half a syringeful (of Pravaz) of the solution of chloride of zinc. Finally, if the hydrocele be small, he injects directly, without preliminary evacuation, a half gramme of the solution of one to ten. No inflammatory phenomena on the part of the scrotum follows, and the patient can resume his avocation forty-eight hours after the operation. The liquid is reabsorbed slowly in twenty to thirty days.—*Revue Jour. de Clin. and de Ther., U. M. d'Can.*

Hygiene.

An Address by Traill Green, M.D., LL.D., of Easton, before the Medical Society of Pennsylvania, in session at Philadelphia, June 5, 1888.

It is well to pause, from time to time, in our work, in which we are engaged for the purpose of promoting the health of those among whom we live, and learn what has been our success.

In reviewing the reports which have been made before this Society by so many able members of the profession, examining the many excellent treatises which have been written on hygiene, and considering the great attainments which have been reached in hygienic science, we find no reason for the belief that our knowledge of the subject has not been largely increased. But, may we not ask, can we, with equal certainty, say that this knowledge has reached to any considerable degree the families in which we minister? What, for example, do we find to be the practice of many of our people (and I do not refer to the lower classes only) with reference to the importance of pure air in our dwellings? Many remain, during the winter, by day in rooms which are not ventilated, and by night sleep in apartments into which no pure air is admitted, while the occupants are consuming the air which the rooms contained when they retired for the night, Is there not a very general belief that night air is in some way exceedingly injurious, and, therefore, must be carefully excluded? Do they not know

that it is the only air to be had after sunset, and must be used or respiration cease?

As regards ventilation, many architects and builders must be very ignorant, or they plan and build in accordance with the ignorance of those who are to occupy the houses which they arrange for them. Not long ago I examined a house that was erected for a wealthy gentleman, who was about to occupy it. I examined it that I might learn how far it had been constructed with reference to the health of those who were to make it their home—to spend most of their time within its walls. It is a large double house, and apparently properly built. I was particularly interested to learn whether the architect had made provision for ventilation—not a flue or register could I find in any room in the house. I met the mason who had been employed to do the mason work. I remarked to him: "That building which you and the carpenter put up is very like a merchant's packing-box, and does not meet the ideal properly-constructed modern house. I could not find any arrangement for ventilation." The mason replied: "There are flues for all the rooms in the house." I said: "I could not find them." "No," he replied; "we plastered all of them up." The carpenter who built the house was the principal builder in the town. I had occasion to direct the construction of an addition to a parsonage, some years ago. I employed a man who possessed an excellent trait of character, which was, that he would do what he was directed to do. The same carpenter to whom I have referred went to examine the work, and asked this man what he was doing. He replied: "I am building a flue, as the doctor directed." "Well," said the carpenter, "it is of no more use than a fifth wheel to a wagon." The work was completed according to the plan, and the family who occupied the house found the addition to be the most pleasant part of it. When any member of the family was ill, he was always taken to this room, where the air was pure, helpful to recovery and pleasant to the nurse.

A scientific sanitarian who is greatly interested in the subject of ventilation, was conversing with a member of a church in this city on the subject. The latter remarked: "The church in which I worship is well ventilated through openings in the ceilings." The scientist visited the church shortly after this conversation, and discovered that all the ventilation was due to a fresco-painter, who represented

openings in the ceiling so well that the members of the church supposed that they were real openings, through which the air which they had breathed passed out of the church.

Dr. Isaac Ray, known to many of our Society, in his interesting little book on mental hygiene, makes this relation: "A gentleman who for many years sat upon the Supreme Bench of Massachusetts, which he had honored by his learning and integrity, and who, in the course of his life, had in all probability inspired more bad air than any other professional man of his time, used to express his surprise that so much was said about pure air and bad air, because 'it seemed to be all alike to him.'"

An intelligent man who had very good knowledge of the value of pure air, told me that he had been in the habit of introducing a good supply of pure air into his bed-room on leaving it in the morning. His wife, who remained in bed, asked him: "Why do you allow so much air to enter the room when you leave it in the morning?" He replied. "If you will rise and go out of the room while it is closed, and return to it, you will learn why I open the windows." And so will every one who sleeps in a room which is not well ventilated.

In a distinguished scientific school in this country there is utter neglect of the laws of health connected with pure air. Classes succeed each other hour after hour, without a change of air. The building was constructed very properly, but ventilators are not kept open. All the teachers are familiar with the laws of health, and the effect of breathing such air as their pupils breathe every day.

From all this we see that builders, housekeepers, intelligent judges and scientific teachers are entirely ignorant of the value of pure air, or wholly indifferent to apply the knowledge which they possess.

Another of the bountiful gifts of the Creator—water—is too little used to cleanse the skin. I need not dwell on this, you are familiar with the ignorance or negligence of many for whom you prescribe.

Not long ago a man applied for admission to one of the hospitals of this city. He was examined, and the physician in charge called one of the assistants to take him to the bathing-room and give him a bath. The man objected, and said: "I bathe twice a year, and not oftener; I bathed myself a short time ago, and will not be bathed now. I would rather have my disease." The physician would not recall

his order, and the man left the hospital. I have been surprised, when attending sick children, and having prescribed a warm bath, often so soothing and so remedial in many of the diseases of children, to hear mothers say: "Doctor, I could not use it; my child would be so frightened that I would fear the result; I never gave it a bath."

I suppose all of us have learned that a child accustomed to the use of water in this way is greatly delighted when placed in the bathing-tub, and the mother finds it difficult to get the consent of the child to be removed from the tub when it has been for a proper time in the water. It will be easily seen that a child reared with this dread of a bathing-tub will not be likely to become a friend to the external use of water. From what many of us have learned in the sick-room, we can testify that the use of water to remove excreta from the skin, and foreign matter deposited upon it, is greatly neglected, or very seldom used; one can not practice medicine for any length of time without discovering that there is great fear that changing the linen of sick persons, and the sheets of their beds, is not without danger to the sick. Cellars are not kept as pure as the health of households requires—decaying vegetables are often allowed to poison the atmosphere of the house; that there is neglect, is discovered in the unpleasant odor frequently noticed in the upper rooms of otherwise well-regulated homes. Yet there are persons who will take the damp, offensive air of the cellar, and send it throughout the house to be breathed by the family. Many instances of this kind can be found in every community.

The house water-closet and stationary washstand still present difficulties in hygiene which, it seems, can not be met. One of the ablest architects said to me not long ago: "When I built my house, I placed a stationary washstand in every bed-room in the house; were I building now, one would be sufficient."

A distinguished chemist of another city, in company with several scientific gentlemen, said: "What can we do to keep our houses pure? My wife called me to examine one of the wash-bowls. A great quantity of green, fungous matter came out of the drain-pipe into the bowl." Is this favorable to health?

What shall we do? Boards of health can do much. Every physician should, to the families under his care, point out the violations of the laws of health. We have not made

much progress. The people seem not to follow the light which we suppose they have. We must begin further down. The necessity for pure air and the free use of water must be impressed upon the minds of our young people. Through our schools, where there is physiological instruction, will the generation now growing up have a better knowledge of hygienic matters. Non-professional persons have observed the neglect of the laws of health.

"Take so simple a matter as ventilation. So far as my observation goes, the school-room, factory, church or public hall, to say nothing of private dwellings, in which the principles of ventilation are adequately applied, is the rare exception, not because the arrangements for it are expensive, but because the knowledge involved is in possession of so small a number. The sweltering majorities live their lives and do their work under conditions where not only their comfort, but often their safety, depends upon the knowledge of simple truths of which they are ignorant."—*The Advancement of Science in Its Relation to Education.*—*W. B. Owen, Ph. D.*

There are several subjects which belong to mental rather than physical hygiene, which have not, as far as I know, been discussed before this Society; but they are so closely connected with it by their influence on the body that they may properly be discussed in the half-hour allotted to me for this paper. One of these is the fear of suffering in the hour of death.

Shakespeare, in "Measure for Measure," Act I., Scene 1, makes *Isabel* say: "The sense of death is most in apprehension."

And *Casca*, in "Julius Cæsar," Act III., Scene 1: "Why, he that cuts off twenty years of life, cuts off so many years of fearing death."

You have doubtless observed many cases of good people who had, during a long life, lived in dread of physical suffering in the hour of death. I attended, many years ago, an excellent man, a rector of an Episcopal church, for disease of the heart, with the usual attendant, dropsy. His wife said to me, on one of my visits: "Doctor, my husband has had great dread of death, believing that it is attended with great physical suffering; except this, he has no fear." I replied: "Madam, I have no doubt that his fear of suffering will not be realized. He will pass into a gentle sleep, and will unconsciously enter into that future life in expectation

of which he has lived." In a very short time, on a Sabbath afternoon, he passed into an unconscious state, and on the following morning entered upon that blissful life for which he was prepared.

I attended a nervous patient, a good woman, who had often expressed to me her fear of suffering in the hour of death. I stated to her what I had often observed at the last hours of the dying. She lived beyond the allotted period of threescore and ten years. I attended her in her last illness, a chronic pulmonary affection. I was at her bedside between nine and ten o'clock in the evening, with her children. A few minutes were spent pleasantly with her, and I bade her good-night. There was no indication of approaching death. She passed, as I was informed, into a pleasant sleep. In less than two hours one of her sons called to inform me that his mother was dead, going into her last sleep as gently and quietly as in her childhood she fell asleep in her mother's arms.

I could furnish instance after instance of the same kind, did time permit, and I am sure the experience of the practitioners present will confirm what I have stated. You will not mistake that other view of death, as remarked by the author of the "Epistle to the Hebrews," chap. ii. 15—that fear which Christ came to allay--"And deliver them who, through fear of death, were all their lifetime subject to bondage."

As it relates to physical suffering, the manner of death by the brain, the lungs or the heart, is sufficient to prove that there is unnecessary fear of suffering in the last hour.

The Scripture account of death usually is: "He fell asleep." The Greek word *koimeterion*, from *koimao*, "I sleep," from which our word cemetery is derived, beautifully expresses the Scripture idea—a sleeping-place.

Some of our poets have expresses this idea:

> "Approach thy grave
> Like one that wraps the drapery of his couch
> About him, and lies down to pleasant dreams."
>
> —*Bryant.*

Hood, in his poem, "The Death-Bed," observed what many have realized as true:

> "We watched her breathing through the night—
> Her breathing soft and low—
> As in her breast the wave of life
> Kept heaving to and fro."

* * * * * * *

"Our very hopes belied our fears,
Our fears our hopes belied;
We thought her dying when she slept,
And sleeping when she died."

And Wolfe, in his monody on the death of Sir John Moore:

"He lay like a warrior taking his rest,
With his martial cloak around him."

There are no cases of death in which the suffering seems so certain as in pseudo-membranous laryngitis. Dr. J. C. Rushmore, of Brooklyn, in the *New York Medical Journal*, May 9, 1888, page 542, writes: "In regard to the history of the case, if the operation (tracheotomy) is not done, my experience has been that death is not nearly so painful as I was at first led to suppose. I make this statement with some hesitation, in view of the fact that many authors advise the operation on the ground that even if the case has a fatal termination, the distress is less than without it. I am speaking now, of course, of those cases where dyspnœa is due to mechanical causes. When patients have died from laryngeal obstruction alone, the picture has always been the same—gradually increasing restlessness and dyspnœa, with paroxysms of spasms added, at times, and threatening death; then the spasm is relieved in a few moments, but a very considerable amount of distress continues, and then a rather rapid development of unconsciousness, the coma continuing for several hours, and the patient dying quietly, the breathing being still obstructed. And this is so uniform, in my experience, that I have been in the habit of telling the patients' friends that, even if the operation is not done, the patient will not choke to death with great struggling and distress, but will die unconscious and with comparative ease. The same change takes place, of course, minus the laryngeal spasm, in those cases where death is due to the extension of the membrane below the tube, and due to the same condition of imperfect aëration of the blood, with its effects on the brain and on the circulation." On this subject it is pleasant to observe the benevolent arrangement that has been made with reference to the lower animals.

The time allotted to this paper will not permit the discussion of the presence of death in the animal world. It will suffice for the present discussion, to say that the continued multiplication of animals would interfere with their happiness,

and then, in the present order of things, sickness and feebleness of age would only be a time of suffering. The presence of carnivorous animals maintains a proper balance, and prevents the suffering which follows the feebleness of age. The presence of instruments of destruction in the carnivora fits them to destroy their prey with the least possible suffering, just as we ourselves make use of methods for killing animals for our food, and ending the suffering of our domestic animals when incurably sick or suffering from old age.

There is, in this arrangement of Providence, benevolence to the lower animals, and why should not the manner of death in the human family be as kindly ordered to prevent the agony of dying?

Dr. Livingston, the distinguished African missionary, describes his sensation when attacked by a lion: "I was upon a little height; he caught me by the shoulders as he sprang, and we both came to the ground together. Growling horribly close to my ear, he shook me as a terrier dog does a rat. The shock produced a stupor similar to that which seems to be felt by a mouse after the first shake of a cat. It caused a sort of dreaminess, in which there was no sense of pain nor feeling of terror, though quite conscious of all that was happening. It was like what patients partly under the influence of chloroform describe, who see all the operation, but feel not the knife. This singular condition was not the result of any mental process. The shake annihilated fear, and allowed no sense of horror in looking round at the beast.

"This peculiar state is probably produced in all animals killed by the carnivora, and if so, is a merciful provision by our benevolent Creator for lessening the pain of death."—*Livingstone and His Life-Work in Africa*, p. 143.

It is pleasant to find in the eloquent writings of Sir Thomas Brown, M.D., reference to this subject. He says: "The certainty of death is attended with uncertainties, in times, manners, places."—*Hydriotaphia*, p. 316.

"The knowledge of future evils mortifies present felicities, and there is more content in the uncertainty or ignorance of them. This favor our Savior vouchsafed unto Peter when he foretold not his death in plain terms [John xxi. 18, 19.], and so by analogous and cloudy delivery damped not the spirit of his disciples."—*Christian Morals*, p. 217.

"To preserve the living and make the dead to live, to keep them out of their urns, and discourse of human frag-

ments in them, is not impertinent to our profession, whose study is life and death."—*Hydriotaphia*, p. 279.

There is another subject which is a cause of painful anxiety to many persons, which is the possibility of being interred before life has become extinct.

It should be known that this subject has been thoroughly investigated. Dr. Prime, for many years a journalist, made every case that was reported a matter of careful inquiry by addressing a letter to the place where the interment was reported to have occurred, and, as an editor, he read of many cases as usually reported with all the horrors naturally supposed to be associated with them.

His inquiries found not a particle of truth in a single case.

In Europe very alarming stories were told not long ago concerning living interments, which were as groundless as were those heard in this country.—See *Medical and Surgical Reporter.*

Our knowledge of the functions of the organs of our bodies will enable us to see how utterly false all these stories must be. If no signs of life can be discovered by the most careful examination of a body, is it not impossible that when shut up in a coffin, made as close as it is, and covered under six feet of earth, it should breathe again? How long would it be possible for a man in full health to breathe and live covered up in this way? Would any one who has studied the laws of respiration believe that a person believed to be dead could possibly revive in the grave? Let us then reject all these stories and remove from the minds of those over whom we have influence, this dread of premature burial.

There is another fear which seems to be widespread, affecting the cultivated as well as the ignorant, to many distressing—the fear of being eaten by worms after burial. This belief is not without interest to our profession, whose knowledge of the laws of life should enable them to decide as to a question of this kind, and in the department of natural history it is surely worthy of our investigation.

Sir Thomas Brown, like a wise physician, and in advance of the age in which he lived, more than two hundred years ago, thus wrote: "While we suppose common worms in graves, 'tis not so easy to find any there; few in churchyards above a foot deep; fewer or none in churches."—*Hydriotaphia*, p. 322, Boston edition of *Religio Medici*, etc., Roberts Brothers, 1878.

It is singular that persons who have knowledge of animal life, can for a moment entertain this belief. Those who work even very little in the earth know that neither worms nor any other creatures are found more than a few inches below the surface.

This belief became prevalent from the observation of worms feeding on the bodies of animals when left unburied in the open air.

Much is due, doubtless, to the poets who have recorded their belief in their writings.

> "One destin'd period men in common have,
> The great, the base, the coward and the brave,
> All food alike for worms, companions in the grave."
> —*Lord Landsdown, Meditation on Death.*

> "The knell, the shroud, the mattock and the grave,
> The deep, damp vault, the darkness and the worm."
> —*Young's Night Thoughts*, iv., line 10.

The translators of King James' version of the Scriptures, believed it so firmly that they thought it necessary to make it the belief of Job also, who did not say a word in proof of it, as it prevailed then and now (Job xix. 26). A reference to this passage shows the use of italics by which the translators introduced their own belief and that of the age. The new version omits the word worms and gives the translation thus: "And after my skin has been thus destroyed."

The Rev. Robert J. Breckinridge, a prominent divine of the Presbyterian Church, was greatly interested in this subject, and during a long life sought for its truth, where it was likely to be found, among church sextons and superintendents of cemeteries—all who would be likely to have any knowledge on the subject. He never found the least evidence of the existence of worms in graves. He never learned that any of those persons favorably placed for making the discovery, had ever seen a worm of any kind in or on a body interred a grave.

I know a very intelligent undertaker, who has followed his business for many years, with the best opportunities for learning the truth. During our late war he had the care of the remains of many soldiers which had been interred in the South, and which had been disinterred and sent home. He informed me that he had never seen a living creature of any kind feeding on these remains. He said the same in reference to his experience in a large cemetery and church-yards, to which his business has called him during the many years

of his service. I do not know any one who is more competent to make such observations, or whose testimony could be received with more confidence.

But we are told Job has other references to worms, Job xvii. 14, "I have said to the worm, 'Thou art my mother and my sister.'" Then surely it will not eat us. The expressions are figurative, as "the womb shall forget him, the worm shall feed sweetly on him" (xxiv. 20). "My flesh is clothed with worms and clods of dust" (vii. 5).

"They lie down alike in the dust, and the worm covereth them" (xxi. 26). Evil and despised men and weak men are compared to worms. The writers so confess themselves, Ps. xxii. 6. "But I am a worm." One of the Herods was eaten up of worms and died. Acts xii. 23. And some of his relatives richly merited the same termination of life.

We have a report from a correspondent of the *Therapeutic Gazette*, in Paris, of the recent discovery of insects on the bodies found in the Ivry Cemetery, Paris. *Therapeutic Gazette*, March, 1888, 209. The writer describes four species of diptera, one of the order coleoptera, two of the order of thysanoura.

There must be an error somewhere in the investigations made in the cemetery at Paris. If the eggs deposited by the blow-fly before interment, became maggots in the grave, this will not explain the statement that other creatures two years later reach a body inclosed in a coffin and buried several feet under the ground. There must have been some condition different from that of interment with us, about which I shall inquire; for after many years of inquiry it is strange that nothing as now reported has ever been observed. From Paris itself there is evidence against this recent statement. When the Cemetery of the Innocents was removed in that city in 1786–87, great masses of adipocere were found, into which the bodies there interred had been changed. This of course could not have occurred if the animal substances had been destroyed by worms.

Such charges have been observed in this city, and elsewhere in this country.

The remedy which some will doubtless propose is cremation, for which all of our friends are not yet ready.

TOTAL abstainers have an average duration of life exceeding by six years that of moderate users of even the lighter alcoholic beverages, such as wine and beer.

Selections.

Conservatism in Gynæcology.

BY A. REEVES JACKSON, A.M., M.D.,*

Professsor of Gynæcology in the College of Physicians and Surgeons, Chicago.

DURING the past quarter of a century, and especially during the past ten years, no department of medicine has shown greater activity or made greater advancement than that which embraces the abdominal and pelvic surgery of women. Many diseases which formerly baffled the utmost skill of the physician and surgeon, and which doomed the patient to a life of pain and misery or to certain death, are now treated with a highly satisfactory degree of success; and the lives that have been saved and made bearable by modern gynæcological methods may be counted by thousands.

It would be an invidious task to name those who have earned the world's gratitude by the part which they have taken in this noble work, and I shall not attempt it. But when we recall the fact that Sir Spencer Wells has performed over two thousand ovariotomies; that Lawson Tait has opened the abdominal cavity over two thousand times for various purposes; that many other operators, at home and abroad, number their gynæcological operations by hundreds upon hundreds, we can not but be impressed by the great need for this work, and the incalcuable benefit to suffering woman that has resulted from it. No words of praise can adequately meet the deserts of these apostles of humanity. But, as an obverse result of the great success which has been achieved in this direction, there has arisen a class of ambitious imitators, who, actuated by more conceit than conscientiousness, more zeal than judgment, are rapidly bringing discredit upon the honest work of others in the estimation of many who can not, or, at least, do not, distinguish between the real and the sham, the true and the false. These persons are apparently afflicted with an uncontrollable itching for rapidly-acquired fame, and seem to think that they can achieve what they desire by beginning

*Read before the Illinois State Medical Society, May 15th.

where their masters left off. With them gynæcology no longer includes adequate effort for the cure of disease; it only signifies the art of cutting something out. It is not even necessary for their purposes that the organs and tissues invaded by them should be diseased; it is sufficient if only they have been left by their predecessors. In one instance within my knowledge, when a spectator at an oöphorectomy suggested a doubt as to the necessity for the mutilation, the operator audaciously pointed out that the ablated organs were already in a state of incipient cystic degeneration—the proof of the alleged fact consisting in the presence of Graafian follicles in various stages of development.

When a woman has an ovarian cystic tumor rapidly growing, and as certainly as a cancer, though more slowly, urging her toward death; or when she is suffering from the disgusting consequences of a urinary or fecal fistula; or from lacerations of the genitals so extensive as to impair or destroy function; or from various other manifest conditions of the pelvic or other organs attended by detectable alteration of structure, and which surely destroy health, comfort or life, surgical aid is imperatively demanded and should be promptly rendered. But when operations involving dangers to life, such as laparotomy, are undertaken for the possible relief of vague nervous symptoms, hysteria, epilepsy not clearly of ovarian origin, insanity, or because there *is nothing else to do*, then such operations are improper and should not be made. When a man is nervous or irritable or insane, does any one propose castration as a remedy? Would not such operation, although vastly less dangerous than the extirpation of the ovary, be regarded as malpractice? And when a corresponding operation is glibly proposed for a fretful, weak-backed, weak-minded, nervous woman, would not the opinion as to its necessity be greatly modified if the patient were a near relative—a mother, wife, sister or daughter? And why? Because it is well known that such operations are not always, not even frequently, necessary; that they sometimes kill, and do not by any means generally cure. If any one finds himself in doubt as to the correctness of a conclusion in such a case, or as to his own honesty of purpose, let him take the case home to himself. If this were done there would be a smaller number of uterine appendages removed, a smaller number of hysterectomies performed. But, so long as the reputation of a gynæcologist, as such, is thought to depend

upon the number of laparotomies he has done, rather than the number of patients he has cured and saved from mutilation, so long will the meetings of medical societies be enlivened by the presentation of platefuls of preserved ovaries and tubes.

And, in this connection, one can not fail to be struck with the large percentage of recoveries which follow operations that are naturally dangerous. Whatever the nature of the specimen shown, however great may have been the difficulties of the operation, these latter, says the report, were all overcome, the operation was successful and "the patient doing well." The word "successful" in these cases means, usually, that the patient was not killed during the operation, and has no reference to the effect of the latter upon the condition for which it was done. These reports are sometimes made so soon after the operation that the patient has had no time to die unless from shock, ether-narcosis, or hemorrhage, and then no report seems necessary. Once, at a meeting of a medical society at which I was present, a fibroid tumor of the uterus was exhibited. The uterus and appendages had been removed by laparotomy a few hours before. The patient was "doing well." Inasmuch as there did not appear to have been any symptoms sufficiently serious to warrant so dangerous an operation, I felt interested in learning the final result, which was that the patient continued to do well until she died six days later. This termination was not reported. An account of the case appeared subsequently in the published transactions of the society, with this heading, substantially, "Successful Removal of a Fibroid Tumor of the Uterus," etc.

This premature reporting of favorable cases (the others are frequently not reported at all) has the effect of misleading inexperienced persons who may feel tempted to repeat what seems to be so simple and beneficial.

It is to be considered, however, that unless such reports were made and specimens exhibited, the world would not know that this particular doctor had done such an operation; and while it is true that the world does not care for the knowledge, and would not be in any way worse for the lack of it, the doctor looks at it from a different standpoint —he wants his name to go into print. What the medical profession wants and needs from each worker in its ranks is a knowledge of the *results*—immediate and remote—of what he does, and such knowledge is always welcomed.

Compared with this unseemly eagerness to report cases, it is instructive and refreshing to read such a paper as that which was presented at the twelfth annual meeting of the American Gynæcological Society, in September last, by Dr. Robert Battey, entitled "Battey's Operation, and its Matured Results." It covered the entire experience of the author, extending over a period of seventeen years, and included fifty-four cases in which recovery took place. Of these, the number in which the patient was cured at once was very small. In the majority the patient passed through various climacteric disturbances, and the time which elapsed between the operation and the disappearance of abnormal symptoms varied from one to three, or even five years, thus showing the utter uselessness of reporting the results of removal of the ovaries within a few days or even months after the operation.

A correspondent of the *British Gynæcological Journal* (November, 1887) gave some of the results obtained by the late Professor Schroder, who performed castration on some neurotic women. "In one case, two years after the operation, the woman's sexual appetite was 'completely dead,' but she was suffering from marked vaginismus. In the second case, one year after the operation, all the old cramps returned. The third case did well for some time; but five years after the operation she began to suffer from fainting fits."

Similarly, no good purpose is subserved by reporting a hysterectomy for cancer until sufficient time has elapsed to show the effect of the operation upon the disease.

Do you know to what extent and for what purposes this indiscriminate laparotomy is proposed and performed? Let me cite a few cases that have come under my own observation, all within less than a year.

About nine months ago a gentleman carried a woman in his arms into my office, and, after placing her upon a lounge, said abruptly: "Doctor, I want to know whether you can cure my wife without removing her ovaries." The question was more easily asked than answered, and I deferred giving an opinion until I had an opportunity of investigating the case. The woman was thirty years of age; she had been married eleven years, and had had two children and one miscarriage, the latter having occurred three years before. She was a well-formed, well-nourished woman of medium height, and had a wholesome visage.

Menstruation was regular and painless, the functions of the bladder and rectum were normally performed, although there was a tendency to constipation; appetite fair, usually, but capricious. Physical examination revealed a slightly congested lower segment of the uterus, the cervix being somewhat club-shaped, owing to a slight laceration of the os uteri, on the inner side of which was a superficial erosion, of no pathological importance. The ovaries and tubes could not be felt, and there was neither swelling nor tenderness in their neighborhood. The woman was fretful, irritable and lazy, "Only this and nothing more." She had been under medical treatment for various ailments (which she probably did not have) during the last three or four years, and had spent the latter six months under the care of a gynæcologist in Chicago, who had used the regulation hot douches, glycerine tampons, massage, etc., without perceptible result. When the impatient husband asked whether nothing more, or nothing better, could be done, he was told that the only thing that offered relief was the removal of the ovaries. This suggestion did not meet with a favorable reception on the part of either husband or wife, and was therefore declined.

There was no pelvic disease present, and there was no further pelvic treatment. I will not trouble you with the details of what was done, as it is not necessary for my purpose. Suffice it to say that the patient left the city in a few weeks for her home. About two months ago the husband informed me by letter that his wife was pregnant, and still later that she seemed very well, and was able and willing to do all kinds of light work, and to take moderately long walks.

Again, a young woman, nineteen years of age, had been suffering occasionally during several years from irritable bladder. She had been treated by a number of physicians with, sometimes, temporary benefit. Being finally referred to a gynæcological semi-specialist, he informed her that inasmuch as so many remedies had failed to cure her he would advise the removal of the ovaries. She still has them.

In a third case the patient was twenty-two years old. Menstruation commenced at twelve; but had always been scanty and irregular, appearing at intervals of from six weeks to as many months. Her appetite was poor, complexion sallow, and her face affected with acne. She was

advised to have her ovaries and tubes extirpated—with what object I can not imagine, unless it was to transfer them to a bottle or plate.

On May 1st, her physician, in reply to a letter, wrote me as follows: "The soft rubber stem was retained for three months, which established her menstruation in much better condition than previous to its introduction—that is, as regards the quantity of the flow. I find she is in very good health compared with what she was last year."

Think of it! Women advised to have important organs removed, the mutilation involving dangerous operations, for the cure of a nervous affection of the bladder, for scanty menstruation dependent upon feeble general health, and for laziness!

At a meeting of the New York Pathological Society, held October 12, 1887, Dr. A. P. Dudley related the case of a woman, fifty-one years of age, who had ceased menstruation one year before. For several years she had suffered from pain in the region of the spleen, and an exploratory incision of the abdomen was recommended and performed. Nothing wrong was found with the spleen, and it was permitted to remain; but it was discovered that she had two ovaries with corresponding tubes, and, although there was nothing abnormal about either of them, they were promptly removed. The reason for this is obscure, unless it be viewed in connection with the question gravely propounded by the operator at the close of his report, namely: "How much good can be done by the removal of the tubes and ovaries after the menopause?" The operation was done on the day immediately preceding the report, and, although sufficient time had not elapsed to determine how much good it had done in this particular instance, it must have been gratifying to all concerned to know that the patient was "doing well." As there are still a good many women living who have passed the menopause, and who are still complete in their organization, there is a wide field from which to cull material that may afford an answer to this remarkable question.

Does not all this justify a remark recently made by Thomas Kieth (*British Medical Journal*), "In abdominal surgery responsibility seems to have become old fashioned and gone out of date."

Dr. Horatio R. Bigelow presented a paper upon this subject to the Ninth International Medical Congress, in

which, speaking of the dangerous tendency to operative measures, he says: "Who can begin to enumerate the number of cases in which the abdomen has been opened for supposed ovarian diseases, when not a trace of anything pathological was discoverable? Who will write the history of the cases in which perfectly healthy ovaries have been removed, as an offending cause, without one shadow of improvement in the general condition of the patient? A human being mutilated, deprived of its distinctive characteristics, and rendered miserable! A human life poised between earth and heaven to gratify the bad diagnosis, faulty pathology, or personal conceit of an irresponsible practioner! A human life *sacrificed to ambition upon the operating table!* Do you wonder, can you wonder, in the face of the grinning, horrid, damning facts, some of which are on record, and a host of which hide their ghastliness in dark places, that there should go out throughout the land a cry for conservatism?"

But, while the prevalent fashionable craze in radical gynæcology is laparotomy, there is another which is equally deserving of the bridle and bit. It is the extirpation of the cancerous uterus. The most ghastly chapter in the history of surgery is that which tells the story of the removal of the uterus for cancer. The operation has sacrificed more years of human life needlessly, uselessly, than any other surgical procedure; and it has perhaps never saved a life which was otherwise doomed. Its statisticts, favorably distorted as they have been, show worse results, both immediate and remote, than do those of any other effective method of dealing with the disease. The operation has never been justified on the ground that it saved life; but other grounds of justification have been urged which are at least curious and interesting, if nothing else. In the discussion of the subject at the recent International Medical Congress, one of the participants (Dr. Dirner, of Buda-Pesth,) held that the operation was a good thing for everybody concerned—for the operator (whom he praised for his work), for such of the patients as recovered, and for even those who died, for the latter were thus enabled to avoid the painful and disgusting accompaniments of the dreadful malady. Dr. Dirner here struck upon the only firm grounds of justifiability, for, if the operation be proper at all, it must be on the ground that it lessens suffering by shortening life. This is legitimate reasoning, because it accords with the facts.

Another gentleman,* who had previously published a report of sixty-six operations by American surgeons, with a mortality of nearly thirty-five per cent., while admitting that such results "would seem to indicate that the operation is an unjustifiable one," excused the unfortunate showing on the ground that many of the operators had had no experience whatever, and others very little in this direction, and *that nothing better, therefore, should be expected of them!* But, while thus admitting their incompetency, he had no word to speak in condemnation of their selfish temerity in thus tampering with the lives of the victims of their ambition. On the contrary, he recommended that, as "practice makes perfect," these men and such as these should go on acquiring experience, because, he added, "Americans have not yet had a fair trial." Here, then, is a new ground of justification—an ethical one—namely, that surgeons ought to learn how to do the operation, even though they sacrifice the lives of one-third of their patients in getting the knowledge.

If the soundness of this doctrine were admitted, I fear that a surgeon who felt very eager to remove a uterus might not be over-particular as to the accuracy of the diagnosis. Indeed, as an evidence that this fear is not a fanciful one, I may mention that at a meeting of the Obstetrical Society of New York, held October 4, 1887, Dr. Tuttle cited two cases within his own knowledge in which the uterus had been unnecessarily removed for supposed malignant disease. In one case, in which the patient recovered, the diagnosis of sarcoma was disproved by the microscope; in the other, which terminated fatally, the hemorrhage was found to have been due to a submucous polypus.

A surgeon who performs a rational operation, however dangerous it may be, having for its object the saving or prolongation of a human life, does a commendable act. But if, after such operation has been repeated hundreds of times, by himself and others equally skillful, and the results have shown it to be useless, or, still worse, injurious, he should still persist, he ought not to be surprised at drawing censure upon himself, and that doubts should arise among his brethren as to the purity of his motives, or, at least, as to the correctness of his judgment. There was a time when the extirpation of a cancerous uterus was unques-

*Dr. A. Palmer Dudley, *New York Medical Journal*, July 9 and 16, 1887.

tionably justifiable, because, theoretically, it offered a better chance for ultimate recovery than any method of treatment hitherto employed; and its greater immediate mortality as compared with that of other methods was not, alone, a valid objection. But when, after hundreds of trials, it was shown to be not only more fatal, but to be followed by no better, or even worse remote results, then, according to all candid reasoning, it should have been abandoned. But it has not been abandoned, and will not be so long as the honest and thoughtful element in the medical profession is not animated by a more actively conservative spirit than it has yet shown. Thus far it has been content to look on and keep silent. The men who are engaged in this objectionable work are the radicals in the gynæcological ranks. Not very long ago they were slitting up wombs; then they began to sew them up. They advised every woman who had a fibroid in the uterus, however harmless it might be, to have it removed—the tumor, or uterus, or both—and they did it, too, whenever they found a consenting victim.

The evils to which I have called attention are, in my judgment, very great. I fear they are growing. A woman has an inalienable right to all the organs with which she has been endowed. She should only be deprived of any of them when it is clear that through disease or faulty function, *otherwise incurable*, her health is seriously impaired or destroyed, or her life imperiled; and only then when the deprivation reasonably promises relief. To those who, from selfish, reckless, or other improper motives, would remove from a woman any of her peculiar organs, I say, in the name of womanhood, in the name of common honesty, in the name of humanity, hands off!—*Med. Jour. and Examiner.*

Obstetric Methods in Prague.

BY HENRY H. MORTON, M.D., BROOKLYN.

During the winter of 1885–86 it was my privilege to live in Professor Breisky's clinic, at the Maternity Hospital in Prague, Austria. This institution ranks second in size to the one at Vienna, three thousand births occurring in it annually, one-third of the material being under Professor Breisky's charge at the time of my residence there. Some

account of the antiseptic and other methods followed in the hospital may be of general interest.

The first essential in carrying out antisepsis is, of course, the thorough cleansing and disinfection of the hands of physicians and nurses. Before examining a woman in labor, the nails are cut and cleaned, and the hands and arms scrubbed with soap and water and a brush. This is followed by irrigation with corrosive sublimate solution, one to one thousand, and the hands are held in a basin of sublimate solution, one to one thousand, for a minute or so. Instruments are allowed to remain half an hour in carbolic acid water after being used. Catheters are boiled half an hour in a five per cent. carbolic acid solution, and cleansed internally. The catheters are specially made, the eye being double and going directly through the catheter, and the portion above the eye being filled in with lead, allowing no crevice for the collection of dirt. The external genitals are carefully washed with carbolic acid solution, before the catheter is passed, to remove mucus which might be carried into the bladder before it. Cystitis seldom occurs, and then only when the catheter is not clean. Hypodermic needles are heated in the flame of the gas, and before giving an injection the skin is washed. Small instruments, such as dressing-forceps, are also held in the gas flame.

The following antiseptic precautions are adopted with regard to the patients: Upon their entering the hospital, and before the first examination is made, the vagina is irrigated with corrosive sublimate solution, one to two thousand. Patients are not irrigated daily unless they have some abnormal secretion, such as leucorrhœa. Upon the beginning of labor, the vagina is irrigated before the first examination. The irrigation is not repeated during the course of labor unless a number of students have examined, the patient has fever or hemorrhage, or there is an indication for the use of instruments.

After the birth of the child, the external genitals alone are washed, and the vagina is not irrigated in normal cases. When, however, any considerable laceration of its structure has taken place, or instruments have been used, irrigation is employed. The uterus is never washed unless it has been operated upon, as in applying the forceps with the child high up, or in perforation or craniotomy.

The uterus is never washed with bichloride, carbolic acid solution being always used in the strength of three per cent.

for prophylaxis, or, when infection is present, four to five per cent.

After every uterine irrigation, two iodoform suppositories are introduced into the uterus. All wounds of the genital passages are sewed up and dressed with iodoform.

After the birth of the child, and before the placenta has come away, the vulva is covered with a sheet of cotton soaked in chlorine water, which is left till soiled, and then replaced by a fresh one. This is changed every two hours, at first, and afterward three times a day. Before the birth, the genitals are washed with soap and sublimate solution. During the puerperal state the external genitals are washed with sublimate, but the vagina is not irrigated while the patient is doing well.

Foul-smelling lochia, a discharge too profuse in quantity, and the continuance of blood in the flow for a longer time than normal, are considered indications for irrigating the vagina, either with carbolic acid or corrosive sublimate solution. The sublimate is never used when the patient is excessively anemic, or is suffering from kidney disease or diarrhœa. When the discharge is normal in character but profuse in quantity, an astringent—either alum or acetate of lead—is used as an injection. The uterus is never washed out without an indication, as, for example, if the patient has fever or endometritis, or the membranes or placenta are retained. Carbolic acid solution from three to four per cent. is made use of in such cases.

In examining a patient with septicemia, if, upon the introduction of the speculum, any portion of the vagina is found covered with diphtheritic deposits, the vagina is first irrigated, and then the patches of exudate are touched with tincture of iodine. When everything has been made clean, so that nothing septic can be introduced into the uterus, that organ is examined.

The rooms for puerperal cases, each one containing six beds, are washed once in ten days with soap and water and hypochlorite of lime solution. Woven wire springs are used on the beds, and the mattresses are taken out of doors, beaten and aired. In the lying-in room the beds are changed daily. In septic cases the rooms are washed as usual, and, in addition, a spray of carbolic acid is used with the atomizer. The bedsteads are put into a room and exposed to a high temperature, the mattresses are beaten and aired, and if discharges have soaked through the rubber

cloth with which each bed is protected, the mattress is burned.

A good deal of weight is laid upon the treatment of the breasts. Upon entering the hospital, each patient has the breast washed daily with borax-water, four per cent. in strength. When a considerable amount of sebaceous secretion is present, upon which the dirt has collected, they are rubbed with a four per cent. borated vaseline to soften the deposit, and then treated as above mentioned.

As soon as the child is born, each of its eyes is treated with a drop of two per cent. nitrate of silver solution. The children's mouths are no longer washed, since Professor Epstein, of the Foundling Asylum in Prague, has found that the delicate mucous membrane is apt to be abraded in the washing, and aphthæ form much more readily than upon an unbroken surface.' The navels are packed in salicylated cotton, which is changed daily when the child is bathed. Diarrhœa and indigestion in newly-born children are treated after a plan suggested and used by Professor Epstein. He supposes that the mother's milk, taken into the stomach by the child, and, not being digested, undergoes decomposition. Bacteria are produced, and act as irritants, exciting a catarrhal inflammation, and keeping it up by their presence. The plan of treatment which he used for some years past is to wash out the child's stomach, using a small Jacques catheter, to which are attached a rubber tube and a funnel. The catheter is passed through the mouth and esophagus into the stomach ; the funnel is elevated, and two ounces of plain warm water are poured into the stomach through the funnel, which is then lowered and the water from the stomach siphoned off. This is repeated several times, until the water from the stomach comes away clear. Milk or food is forbidden for twenty-four hours, and the child is given albuminated water, made by mixing water and the white of egg, every two hours, the child taking about sixteen ounces in twenty-four hours. This is given on account of the thirst. The stomach-washing is not repeated. When the diarrhœa is very severe, small doses of acetate of lead are given alternately with the albuminated water. Since the adoption of this plan of treatment in this disease, the deaths have been much fewer than formerly.

I may here mention, incidentally, that the administration of ergot as a routine treatment to favor firm contractions of the uterus, was abandoned in 1882. The patients do as well

without it as during its employment, hemorrhage being no more frequent.

In conclusion, I would say that the utility of the antiseptic precautions is proved by a comparison of the results before and after their adoption. In the old Maternity Hospital, before antisepsis was used, the mortality was from eight to fifteen in a hundred. In the present institution, the entire mortality ranges from four to six deaths in a thousand, and the septic mortality is from two to two and a half in a thousand per annum. I should remark here that this hospital is used for teaching purposes, and each patient is examined by from three to six students, in addition to the regular staff. Since the present methed of treating breasts was begun, eight hundred and forty women have been confined in the hospital at the time of the writing, and only two cases of mastitis had occurred, both of which were in patients who had no preparatory treatment, having entered the hospital in labor. Cystitis seldom occurs, and it is then usually traced to an improper cleansing of the parts or of the catheter. The frequency of ophthalmia neonatorum has been greatly diminished under the use of nitrate of silver.

I take this opportunity of expressing my thanks to Professor Breisky and his assistant, Dr. Carl Fleischman, for the many favors extended to me during my sojourn in Prague.—*New York Med. Jour.—Weekly Med. Review.*

A Remarkable Case of Brain Injury.

BY JOHN D. BLAKE, M.D.,

Professor of Physiology and Genito-Urinary Surgery in the Baltimore Medical College.

Was called July 17, 1887, about 2 P. M., to Valentine F., a German, sixty-seven years of age, who, according to the history given me by his family, had left his home about 6:30 A. M., on the morning of the 15th (two days previous to my being called), and was brought home about 4 P. M., same day, 15th (the day was exceedingly warm), by two young men, who stated that they found him sitting against one of the pillars supporting the B. & O. bridge at Mt. Clare Junction, which is about one half mile from the western city limits. They stated that he was sitting there crying, and begged them piteously to bring him home, giving

them at the same time his address. With slight assistance he got into their wagon; but on their arrival home, some three-quarters of an hour later, they found him unable to get out, or walk after he was gotten out. The family, thinking that he was prostrated by the heat, assisted in his removal from the wagon to his bed-room, where he was placed comfortably in bed. Soon after he was to put bed, he raised himself on his elbows and asked for a drink of water. This being handed him, he drank without perceptible difficulty. The request for drink was often repeated during the night, and his swallowing seemed all right. Soon after his first drink, he asked for something to eat, which was also swallowed with seeming ease and relish. Next morning, however (Wednesday), the 16th, according to the statements of the family, he became very stiff—not able to rise on his elbows, as he had done the evening before; he talked as if his tongue was very thick; this stiffness became more general as the day passed, and in the afternoon he seemed very stupid and drowsy, and talked with great difficulty; could hardly be understood; voided his urine unconsciously.

July 17.—This morning seems very much worse; is completely paralyzed on right side. The family now becoming alarmed at his condition, sent for me, this being about noon; and in order to make him more presentable, attempted to remove his very much-soiled shirt, in order to replace it by a cleaner one. In drawing the shirt over the head of the patient, his wife and son discovered something black beneath the very full suit of gray hair which completely covered his head. Not being able to make out what it was on account of the slightly puffed condition of the scalp somewhat hiding the edges of the foreign substance, they awaited my arrival, which occurred at two o'clock P. M.; my attention being directed to it especially, I applied a pair of strong forceps, and with some considerable force succeeded in extracting from the skull a railroad spike (which I now present for your inspection), three and one-eighth inches long and three-eighths of an inch in diameter. It was driven in until the head of the spike pressed the scalp firmly. Following its withdrawal was a small quantity of offensive, decomposed blood and serum, which I succeeded in getting rid of by arranging the position of the head and mopping with antiseptic absorbent cotton. The opening through the skull being sufficiently large, I extracted several large spiculæ of bone with my forceps. This being done, I set out to obtain

a history of the case up to that time, which was what I have given you. I then noted his present condition, which was as follows: Hemiplegia complete on right side; sensation nearly abolished on same side; can't talk, but understands; tongue runs to left side; can only be partially protruded; understands me when I speak loud, and says he has no pain, and the removal of the spike did not hurt him. (My questions were answered by nods of the head, at my suggestions.) Says he will take a little milk, in answer to a question. He swallows badly; uses his left hand and leg; answers all of my questions by nod of head, except as to how he got the nail in his head. He recognized the nail as being the spike, knew he was sick, knew his son and others; his mind seeming much clearer an hour after the removal of the spike. But he constantly refused to nod when asked such questions as the following: Did Mr. S., who went out with you on Tuesday, do this? Did you do it yourself? Did the men who brought you home do it? Did you fall from the bridge? etc., etc., to none of which would he give the slightest nod. I then said, "Are you in pain?" He immediately nodded no. Tears at this time were running down his cheeks, but he did not give any other sign of emotion.

His respiration was slow, his pulse full 94; temp., $103\frac{3}{5}$; skin moist.

July 17th, 8:30 P. M., more stupid; does not answer so promptly, but does so slowly; pulse, 96; respiration more rapid now—22.

July 18th, 9 A. M., is perfectly quiet; suffers no pain; has taken a little milk which he swallowed badly; temp., 104; pulse, 98; is more stupid; 3 P. M., about the same.

9:30 P. M., still worse; slight muscular twitching of the left side; discharge more watery and more free; temp., 104; pulse, 100; respiration somewhat jerking.

July 19th, 9:30 A. M., in a profound stupor; takes nothing; pulse, 98; temp., 104.

July 19th, 3 P. M., almost comatose; has had a slight spasm.

9:30 P. M., has had two more convulsions which were very strong; seems to be sinking; respiration, 22; pulse, 98; temp., $103\frac{3}{5}$.

July 20th, 9:30 A. M., evidently sinking; respiration, 51; pulse small and very rapid; in a slight tremor; has had another convulsion.

3 P. M., still sinking; has had another convulsion.

9:30 P. M., respiration, 55; pulse very rapid; profoundly comatose, and died at 2 A. M.

A *post-mortem* revealed the fact that the spike had entered the skull through the left parietal bone near the median line and one and one-half inches from its junction with the frontal bone, passing obliquely downward and forward, entered the left hemisphere just anterior to Rolando's fissure, and sufficiently close to the longitudinal fissure to open into it all the way down to the corpus callosum. The spike passing through those fibres went into the lateral ventricle, the point entering slightly the intra-ventricular portion of the corpus striatum (the track of the spike can be clearly seen upon the specimen of the brain which I now hand you for your examination). The skull cap presents nothing unusual, except this large hole through which the spike passed into the brain, and which you see is large enough to allow the passage of my little finger; you will please examine it for yourselves. In regard to the spike, I would state that expert machinists and nail-makers to whom it has been submitted, declare that is a perfectly new one, and that its head clearly shows that it was driven in with a rock, brick or some rough substance, and that a hatchet or hammer was not used. As to how he got it in his head, this remains a complete mystery.

As to the points of special interest in this case a few of the many may be cited:

1st. Is the fact that we had a very perceptible restraining effect produced upon the heart, as we see that, notwithstanding the fact that he had a very high temperature constantly, the pulse never was over a hundred until the last day. This I think was due to the inhibitory center being influenced possibly by the injured condition of the cortex. The localized meningitis, I think, will account for the high temperatures.

2d. Why was there not from the very first a decided interference with motion? The young man who found him says that he got up from his seat and got in the wagon with only ordinary assistance. When he arrived home he was stiff, but could use his limbs tolerably well; he could talk, swallow and chew his food; this, of course, is what his family and others say. Certainly, when I saw him two days after, he could hear well and swallowed comparatively well. Of course, as the temporal lobe was not injured, we would expect retention of hearing.

3d. There was relaxation of the sphincters from the first.

4th. From the injured condition of the corpus callosum we would have expected from the first slow cogitation, which we did not have other than could be accounted for possibly by shock.

5th. When we remember that voluntary motion has been traced and is supposed to be confined to that portion of the cortex known as the motor or central area of the brain (including the ascending frontal, ascending parietal and superior parietal lobes), why is it that, when we had certainly a large portion of this area absolutely torn asunder and destroyed, the spike still resting in its substance, the man could walk with little or no assistance, could use his tongue, as in asking to be brought home, giving his address, etc., to the men who brought him; also asking for food and drink of his family, and swallowing the same?—*Medical Times*.

Missouri Medical Association.

"Albuminuric Retinitis," by B. E. Fryer, M.D. It is one of the few diseases that come on so insidiously that very few of their victims are aware of their presence till they have a fatal hold. The successful treatment of the disease depends largely on its early recognition, and no one can so early detect it, as a general rule, as an oculist. There are met with in practice what might be termed masked cases of albuminuria, cases in which no very active or aggressive symptoms are manifest till pregnancy occurs; then, as if by an explosion, the graver symptoms begin to be manifested. Not uncommonly these symptoms are of but short duration when total blindness ensues. There may have been little or no headache or sleeplessness, and yet the retina, if carefully examined, will show the ravages of the disease. To illustrate this he read notes of a case that recently came under his observation: The patient was a woman in apparently good health; she had borne two children, and was six months advanced in her third pregnancy when he was consulted. She was at that time having dimness of vision; there was no swelling of the body anywhere from anasarca, but the eye manifestation of the disease was very grave. He advised the immediate induction of premature labor, but neither she nor her friends would consent to it at that time. Inside of three weeks she was almost entirely blind and deaf.

She was put on active treatment, and went along to term and had no convulsions, but neither vision nor hearing have improved much. The fundus has cleared up a little, but atrophy is going on, and that will eventuate in total blindness.

There is no time to be lost in these cases when symptoms begin to manifest themselves early in gestation. Statistics show that when symptoms do not arise till within the last two weeks of pregnancy they all recover; when they appear at eight months one-half recover entirely; while of those who develop retinitis at the seventh month, without abortion being induced, all go blind and many die. He had a case under observation some years ago where in four days from the time of his first examination the gravest symptoms were developed.

"Some Points in Railway Surgery" was the title of a paper by Dr. W. P. King. He said it has been suggested by some surgeons that "railway surgery" is not in any way different from the surgery of ordinary contusions and contused wounds. That the same character of wounds is constantly found in the practice of every practitioner is true, but so are gunshot wounds and cuts by blows with sharp instruments and stabs with pointed instruments, and yet no one objects to the term "military surgery." Any surgeon seeing and treating the injuries that occur among men working on and operating railway trains will soon be struck by the severe character of the contusions, by the terrible crushing, both of the soft and hard portions of the body. The machinery is all very heavy, and when the injury is done—as it generally is—by a moving body, and that, too, generally moving at a high velocity, it need not be wondered that there is very great crushing of the tissues that are wounded and very great consequent shock. The injuries that require amputation of portions of the body are proportionately greater than are found in any similar number of injuries in civil life, and, as a consequence, they offer a fine field for the exercise of antiseptic principles.

The dirt and grease incident to the running of machinery also render it impossible to get good results, except by a very thorough course of chemical cleansing. The first moments after an injury are the most favorable to the entrance of this surgical filth, as nature's gates are all open and the most susceptible of contamination of all fluids is being poured out—in short, there could be no more favorable

conditions for the entrance of disease germs into the wound than are to be found in almost every railroad accident. The wounds are almost invariably contused and lacerated, with dirt and dirty portions of the clothing forced into the wound to inoculate it. It is in this field, then, that we would naturally expect the most brilliant effects from the antiseptic treatment, and the results we have when it is properly done do not disappoint us.

Wounds and injuries that under the old methods of dressing demanded immediate amputation to save them from the effects of septic poisoning can now be dressed with care and the limb be saved. Large sloughs may form, but they should be at once removed and the antiseptic washes freely applied and the antiseptic dressing again applied, and we will have a limb where formerly we would have had a stump. It is well in the first dressing to remove all fragments that will probably die, that there may be no more sloughs left in the wound than are necessary.

As to the question of amputation, which to the average doctor is thought so much of, any fool can cut a limb off. It is generally possible to save a limb so long as there is a reasonably good circulation in it.

Now as to the question of how to amputate in order to get the best stump, he would say a good stump should contain the least possible amount of cicatricial tissue, both for the reason that it is less painful and that when once healed it is less liable to again open up. Within the past few years a modification of Teel's operation has appeared to give the best results. When a primary amputation has to be done, he has found it better to go far enough from the wound to get into healthy tissue. The distance from the apparent seat of injury that the actual injury has extended is always a surprise to those who are not in the habit of seeing those cases. Secondary operations should always be preferred where it is possible. Many lives will be saved by following this plan of modern surgery.

"An Operation for Entropion," by Dr. J. H. Thompson, Kansas City. Two of the chief difficulties in the usual operation are incomplete result and often great disfigurement of the eyelid. The object in more modern methods is to permanently remove the displaced cilia of the eyeball. In entropion dependent upon an incurving of the tarsal cartilages and absorption of the internal angle of the edge of the lid, the ordinary plaster operation (removal of an elliptical

piece of skin from the surface of the lid and stitching the cutaneous edges together) will not be permanent in its effect, unless, by chance, the operation is done when there is no more danger of a continuance of the contraction of the neoplastic deposit on the under surface of the tarsus, when, if it is successful, there is danger of lagophthalmus.

By far the best operation for the most severe entropion is the one devised by Hotz, of Chicago. But in the ordinary moderate cases a modification of the above is very effective, and, like it, does not prevent a further attempt if by chance the primary operation is a failure. The method he advised may be called a modification or an incomplete Hotz.

The operation is done as follows: As a rule, a general anæsthetic is not needed; a hypodermic injection of cocaine over the lid will suffice. A curved incision is made through the skin from the external to the internal canthus, parallel to the upper edge of the tarsal cartilage, but about one-eighth of an inch below it. The cut should not reach the edge of the lid, but should leave sufficient space to miss the larger blood-vessels entering at both angles and to avoid the danger of sloughing. The skin flap is then carefully dissected from the underlying muscle to the edge of the lid, but inasmuch as the process is extremely bloody, the cutting must be done with care. Then, after turning the flap from the lid, all the muscle or subcutaneous tissue is carefully cut away from the cartilage, so that it remains freely exposed. The greatest care must be given to this dissection at or near the edge of the lid, but more particularly must any interference with the tendon of the levator palpebrarum be avoided. After all hemorrhage is controlled, and the wound cleaned, the operation is completed by sewing the flap to the upper edge of the tarsus, as in the Hotz operation. Four or five sutures will suffice. It is important that the threads be properly placed. With a curved needle carry the suture through the edge of the flap; also through the upper edge of the tarsal cartilage, and finally through the free border of the upper skin wound, so that when the sutures are tied the wound is not only closed, but the skin is stretched over the tarsus and compelled to heal in that position. The effect will be a turning upward and outward of the ciliary edge of the lid, without displacement or disfiguring scars.

Dr. Todd, C. A., then read a paper on "The Treatment of Some Forms of Disease of the Ear." Acute inflammation of the tympanum is a dangerous disease; not so much

from its locality as from the tissues it may spread to and involve secondarily. It should be treated by (warm) emollient applications till the active stage is passed. Rarely uses a syringe to wash out the ear. Prefers to mop out any discharge that may be there with cotton, and blow in some dry, finely powdered borax or iodoform. If this should dry and harden, it will be necessary to wash it out with a little warm water. He usually finds, however, that there is too much moisture there already, and that drying dressings give the best results. When there are fistulous openings they will have to be injected with some substance that will not only cleanse them, but that will, at the same time, stimulate them. Alcohol does very well for this purpose. When the discharge has entirely ceased, the patient should be told that it may return on slight provocation. For throwing in powders, he finds a middle-ear syringe better than anything else.

Dr. Bryson read a paper on "The Treatment of Stricture by Electricity." He does not mean spasmodic stricture, as many suppose, but genuine organic stricture. He does not believe that cutting can cure a stricture. It does not remove the cause; it is only trying to get around it by an incision, which, when healed, has closed up the new route. Some agent that possesses the power of dissolving this neoplasm is, in the very nature of things, the only one that can effect a cure. Electricity is this agent. The French divide the disease in three forms:

(1) Irritable, where there is no neoplastic tissue.

(2) Inflammatory, new formation causing narrowing of the lumen of the canal.

(3) Narrowing of the canal caused by traumatism.

In the first class there is nothing required but to relieve the irritation, and the patient is well. In the second the neoplastic formation must be taken away. Usually it has formed outside the lumen of the urethral canal, and no agent at present known decomposes it without destroying the mucous membrane, except electricity; it does not even destroy the surface cells. In using it he finds the positive pole best at first, and afterward the negative. Doesn't use it longer than six minutes at a time and four days apart. He thought the brilliant results claimed by Dr. Newman were true in every respect.

"Electricity," by Dr. Potter. He has been using it to reduce neoplasms. Recently applied it to a goitre (to the

surface only), and in a few days reduced its size one-half. He found, however, that no further reduction was possible. Introduced the negative needle and passed the current through it for twenty minutes, when the tumor had entirely disappeared. In another case, after applying it for a few days to the outside and getting marked reduction, he left it off for some time, but the subsidence that had begun continued, and in a short time the cure was completed. He had succeeded in the same way in fibrous tumors. In all these cases, while using electricity, he applies compound tincture of iodine, and has found that it will sometimes destroy the skin and leave a cicatrix of some magnitude.

DISCUSSION.

Dr. Love thought that Dr. Barck's paper on "Chloroform Narcosis" exceedingly practical. It has long been felt that some means of detecting and determining the danger point being reached in chloroform administration, other than respiration, was necessary. He hoped the state of the pupil would be the means. To him it seemed very reasonable. The brain is the first nerve-center to be affected, and the respiratory tract the last. It is surely better to have our danger signal from the point of first invasion than from the last.

Dr. Kerogle wanted to ask the essayist if the sensation would not be abolished before dilatation of the pupil occurred. He had a case, a short time ago, where there was complete anesthesia of the cornea, and there was at the same time a highly contracted pupil, and in a few days after he had another case, where there was dilatation of the pupil and the cornea was still sensitive.

Dr. Bryson, in discussing Dr. Fryer's paper, called attention to the fact that morning urine is not the best to select a specimen from for examination, as the body while at rest gives rest to the kidney, as well as relieves it from vascular tension. There is never any bladder irritation, except where there is decomposition of the urine.

Dr. Barckley, in discussing Dr. Todd's paper on "Diseases of the Ear," would call attention to the benefit to be derived from the use of small doses (grs. 1-10), ten times daily, of sulphide of calcium. In order to thoroughly wash out the ear, it is necessary to have some small tube that can be readily bent to any angle desired. Has been able to get this by stretching small-sized pure rubber tubing on a small

wire, heating it while in this position, and while hot immersing it in cold water. This can be used on the nozzle of a syringe, and may readily be bent by warming, bending to the desired angle, and again plunging into cold water. Has found more detergent, stimulating and antiseptic qualities in dilute solution of peroxide of hydrogen than in anything else.

Dr. Thompson believed this very good treatment, but finely powdered borax does better than anything else to clean the crust away. The principal trouble is to get it up to the seat of the disease; this quite often can not be done. Water as a wash, with some medication, is the only way to reach the seat of disease. Thinks there are many cases that can not be cured by any method. Sexton pointed out long ago that some cases can only be cured after the removal of the ossicles. He has never yet been able to cure a mucous discharge from the ear.

Dr. Potter, in discussing Dr. Bryson's paper, would like to know just how strong an electric current should be used to produce the desired absorption of a stricture, and yet not injure the mucous membrane.

Dr. Bryson had no definite rule to go by, except that it world has since verified, that fermentation is not due to the must be strong enough to decompose, and not strong enough to cauterize. It is not possible to get the same effect from both ways of using it.

Dr. Halley had been much interested in the subject, and last year, at the meeting of the American Medical Association at Chicago, had attended closely to Dr. Newman's description of the method he adopted. He claimed to have obtained positive cures in almost every case, but in using it he was accurate in the measurement of the strength of the current, never using more than seven milliamperes. He thought that if anything was to be done with electricity in surgery, it must be done with accuracy. The present mode of using it is very much like the pharmacopeia or dispensatory of two hundred years ago. Before any physician publishes results of treatment for the benefit of his confreres he should be in a position to state just how much, how often and how long the remedy was used.

Dr. Carson had used electricity for the cure of stricture, and had used it after the methods described by Dr. Newman, and thought he had cured his case; but in a short time he was sent for to see a man suffering from retention

of urine, and when he got there he found it was the man he thought he had cured. Had to dilate the stricture before he could cure it.

Dr. Fitzgerald had seen some good work done with electricity, but it must be done with judgment and with a full knowledge of what agent we are working with.

Dr. Richmond read a paper detailing the history of the development and subsequent removal of a urinary calculus from the lower part of the left ureter. Removed it through the bladder, after dilating the urethra. They are very rare occurrences; Dr. Emmet has seen only two such cases in all his practice. Recovery perfect. It was a uric acid calculus.

Dr. Meisenbach read a paper on "First Care of the Injured." He dwelt on the importance of having the people more instructed in cleanliness and care in giving attention to the injured. Popular instruction should be given in our schools as to how to stop blood, relieve pain, treat a faint, resuscitate the drowned, etc. How to keep filth away from fresh wounds is now very necessary knowledge in order that antiseptic dressing may be of benefit.

Dr. Lucas read a paper on "Pneumonia and its Treatment," in which he stated that out of one hundred and thirty cases of pneumonia that he had treated in the past two years he had only lost one. He gives five-drop doses of tincture of aconite and five-grain doses of quinine every two or three hours, and is confident that by this means he can abort the disease in its early stage.

Dr. Fry read a paper on "Paramyoclonus Multiplex," in which he detailed the history of a young woman aged thirty, who for twelve years had been running a sewing machine. When first seen she had very vigorous (clonic muscular) contractions of the legs and thighs, but this soon gave place to a general spasm of all the voluntary muscles, but especially those of the extremities. When she would stand or attempt to do so, the heels would clatter on the floor, keeping up a rhythmical sound. These attacks came on several times daily. The muscular spasms became very violent, especially in the flexors of the arms and thighs. It became necessary to put her to bed in order to prevent her from injuring herself. Here she became worse, and was unable to keep the limbs quiet, owing to the muscular spasm. The attacks would last about ten or fifteen minutes. The only cause that could be found was her having been engaged running a sewing machine from ten to twelve hours daily for the past

twelve years. She had used both feet in propelling the machine.

In treating her he found more benefit from the use of chloral hydrate than any other drug; after that the bromo-hyoscine. Since recovering her muscular system has appeared more readily provoked to the spasmodic action than before. She enjoys reasonably good health now.—*Kansas City Medical Record.*

Gleanings.

To Abort a Whitlow.—Gaucher, in the *Jour. de Med. de l'Algerie*, recommends painting the affected finger to the first joint with the solid stick of nitrate of silver. All trace of the disease disappears within twenty-four hours.

We have tried the plan, and while the case went on to suppuration, the course was shorter and milder than in cases not so treated.—*Med. Times.*

Antipyrine.—In the *Medical Times*, May 1, 1888, antipyrine and resorcin are spoken of as useful in whooping-cough. I beg to add my testimony in favor of antipyrine, which I have been using for several months in whooping-cough. I give it in fractional doses often repeated.

For a child of two years:

℞. Antipyrine, ... gr. iij.
Ol sacch anise, . . . ℈ j.
M. cht. in . . . . xij. terebene.

Some every two or three hours.

Notice that I make no claim except to call attention to my results which have been satisfactory.

Jas. Collins, M.D.

Borofuchsin as a Stain for Tubercle Bacilli. — Professor Lubimoff describes, in the *Meditsinkoe Obozrenie*, a new stain for tubercle bacilli, which he calls borofuchsin. It consists of—

℞. Fuchsin, ... 7½ grs.
Boric acid, . . . 7½ grs.
Absolute alcohol, . . . 4 drachms.
Distilled water, . . . 5 drachms.

When prepared in this way it has a slightly acid reaction; it is quite clear and not liable to spoil by being kept, and consequently it is always ready for use. The sputum is dried on a cover-glass and stained by being heated in contact with the borofuchsin for one or two minutes. The stain is then washed out by treatment with dilute sulphuric acid. The specimen is then washed with alcohol, and subsequently immersed for half a minute in a saturated alcoholic solution of methylene blue. After being washed in distilled water and dried, the examination of the specimen is made in oil of cedar or in a solution of Canada balsam. In exactly the same way sections of tuberculous organs may be stained after hardening in spirit, only in such cases the steps of the operation must be somewhat more prolonged. The main difference between this and other staining processes for Koch's bacilli is, that when borofuchsin is used, the process of washing it out with sulphuric acid is an almost instantaneous one. All other bacilli are, as when other stains are used, rendered colorless and invisible, the tubercle bacilli alone being seen.—*Lancet,* April 21, 1888.

Chloral.—Fifteen grains of chloral, given every hour in cases of high maniacal excitement, may prove abortive, and the patient's blood may, at the end of five or six days, or even hours, of such treatment, become vitiated and depraved, the vital centers of the medulla weakened, and when, as sometimes happens, the attending physician, or another one called in, becomes desperate, and gives a very large dose of chloral, no reaction follows the profound hypnotic impression, the cerebro-medullary centers being completely overwhelmed and incapable of that physiological rest and rebound which should be the aim and result of all therapeutically induced slumber.

Fifteen grains of chloral in mania, as a general injunction, is bad. A full dose at the right time, when nature is likely to incline most readily to rest, and not more than once repeated, and without previous small, abortive, and, of course, damaging doses, is better. No experienced alienist would stereotype such a direction for mania and states of high cerebral excitement.

The administration to epileptics of anything with chloral in it during the time when the patient is going about is also unscientific advice. The same criticism holds good in regard to nervousness and irritability in persons going about. It is

dangerous to give chloral to persons who are not in bed, or going immediately to bed, to remain till the effects of the chloral pass off. If this danger is kept in mind, and chloral is only given to recumbent patients late in the day, in the evening or night-time, in a single or, at most, a duplicated dose, nicely adjusted to the demands of the case, no untoward results need ever follow its use.

We should never give chloral for headache or neuralgia in the daytime, unless the patient should be sadly in need of, and ready to go to sleep.

Chloral imbecility may readily be induced by giving repeated small, ineffectual doses, and it requires large doses to prove effectual in great cerebral or sensori-motor nerve excitement, when the patient is sitting up or going about.—*Editorial, Alienist and Neurologist.*

THE TREATMENT OF DYSMENORRHŒA.—Goubert prescribes for young girls:

Iodoform, ...	gr. $\frac{1}{2}$
Ext. belladonn., ...	gr. $\frac{1}{6}$
Asafœtidæ, ...	gr. $1\frac{1}{5}$

In pill form.

Beginning six or eight days before the time of menstruation, six pills should be taken daily.

For adult women he prescribes:

Potass. iodid., ...	℥i.
Tinct. croci., ...	℥ii.
Tinct. belladon., ...	℥iii.
Syrup aurant. cnrt., ...	ad ℥iv.

Dose. A tablespoonful morning and evening, in any convenient liquid, for a week preceding menstruation.—*Gaz. de Gynécol.*

A REPORT comes from a New England town of the death of a young woman who had just given birth to a child, under the obstetric service of a "Christian scientist," whose only remedy for the post-partum hemorrhage which ensued was prayer. In the excitement the child failed to receive the necessary attention, and it also died. This latest species of quackery, as sacrilegious as it is impotent, is securing quite a following throughout the country. Several of its exponents have opened out in this city. Fortunately the coroner has not as yet been called to sit in judgment as to

the cause of death of any of their patients. This argues well for the intelligence of our citizens. But it will not be long before some such case as the one above alluded to occurs. There will then be the usual locking of the stable door after the horse has been stolen. The Lord will, in answer to prayer, help those who help themselves, and it is criminal to teach the possibility of getting something for nothing (or for the mere asking) even in matters of health. —*Med. Age.*

Mr. St. Clair Buxton finds the following formula uniformly successful in curing tobacco amblyopia.

Liq. hydrarg. perchloridi (B. P.) .	℥ss.
Potassii iodidi, ...	gr. xij.
Aquæ destil., ...	℥j.

To the above he adds for simultaneous administration the following pill:

Ext. nucis vomic., ...	gr. ss.
Ext. hyoscyami, ...	gr. j.

Ft. pil. no. i. The pill of this strength is given three times a day, and with the solution.—*Lancet.*

A Caution against the Common Use of Potassium Chlorate.—The *Medical Press* writes that chlorate of potassium is a very popular remedy; so much so, indeed, that the idea of its being poisonous in certain doses never occurs to any one. Yet it is evident that if five-grain pellets be thoughtlessly sucked at intervals throughout the day, a very considerable and certainly injurious quantity will ultimately have been absorbed. In children it gives rise to cerebral symptoms, especially "night terrors," with more or less intense prostration. It would be well if the public were cautioned now and again that they can not with impunity assimilate indefinite quantities of a salt which, in anything like large doses, is an unequivocal poison.—*Med. News.*

Ointment of Nitrate of Mercury in the Treatment of Boils and Whitlow.—Dr. R. C. Kenner has used this ointment for six years as an abortificiant for boils and whitlow, with excellent results. He covers the whole finger (in the case of whitlow), or the boil and the surrounding skin with a layer of the ointment one-eighth of an inch thick, and then applies adhesive plaster. The application is not

painful; it causes a slight and not unpleasant "drawing" sensation, followed by disappearance of all pain in twelve hours. In twelve hours more the inflammation has usually gone, and the inflammatory products are in great part absorbed. This method of treatment is, of course, applicable only in the early state of these affections, before the formation of pus.—*Med. and Surg. Rep.*

Effects of Moderate Drinking on the Heart and Circulation.—Dr. George Harley sums up the effects upon the heart and circulation which he believes follow the moderate use of alcohol, in the following propositions: 1. Alcohol, when indulged in, even well within the limits of intemperance, has a most prejudicial effect on heart disease. 2. Sudden spurts of muscular exertion act most deleterious on all forms of organic cardiac affections. 3. Mental excitement is a cause of rupture of atheromatous blood-vessels. 4 A mere extra distension of a stomach by wind may suffice to fatally arrest a diseased heart's action. The knowledge of these facts has, he says, for some years past led him to make it an invariable rule to impress upon all patients laboring under diseases of the circulatory system, who desire to minimize the effects of their complaints and ward off as long as possible the inevitable fatal termination, to pay strict attention to what he calls the following three golden rules: (1) Take exercise, without fatigue; (2) Nutrition, without stimulation, and (3) Amusement, without excitement.—*Lancet.*

Neuritis.—A case of neuritis involving the sciatic and crural nerves of one side, accompanied by loss of power and wasting of muscles, was recently presented at the Jefferson Clinic, and the following plan of treatment advised: R. Syr. calcii lactophosphatis, f ℥ j; liq. potassii arsenitis, gtt iij. M. Sig.—Ter die. Also of ol. morrhuæ, ℥ j ter die.

Locally, to lessen congestion, a constant, descending, stabile galvanic current as strong as could be borne was advised to be used to the affected nerves; faradism, if need be, to exercise the muscles; and for the pain, if it became at any time necessary, the hypodermatic injection of cocaine in the vicinity of nerve.—*Coll. and Clin. Rec.*

Mastoid Disease—Conkling's Case.—I hope that in what I am about to say I shall not be considered as criticis-

ing the treatment of the lamented statesman who so recently was lost to an admiring nation. I desire simply to emphasize what I have formerly said in these pages, in regard to the necessity of early operation in cases of mastoid disease. In all cases of inflammation of the mastoid cells, whether acute or chronic, the bone should be perforated just as soon as the diagnosis can be made reasonably certain, and, in doubtful cases, where the symptoms are grave, the patient should have the benefit of the doubt. In the report of Mr. Conkling's case we are told that when the perforation was made "a large amount of pus escaped." This shows that the mastoid disease had been progressing quite a while, and emphasizes the point I wish to make, viz.: that had the operation been performed two weeks or even ten days earlier, there is every probability that this valuable life would have been spared to his country. Very recently, in consultations with Dr. J. T. Larew, of this city, I assisted him in perforating the mastoid process in the case of a young man who had suffered the most intensely agonizing and persistent pain in and around the ear for weeks, and which would not yield to any form of treatment. Finally brain symptoms set in and settled the propriety of an operation. We found no pus; but the procedure relieved the patient and he soon got well. I can not too strongly urge the propriety, indeed, the necessity, of operative interference in all such cases.—*St. Louis Med. and Surg. Jour.*

Practical Anatomy.—They had asked Dr. Sandblast, the eminent surgeon, to carve the festal fowl, and he stood over it with the carving knife delicately held in first position. "The incision, you will observe, gentlemen," he began, dreamily, "commences a little to the left of the median line, and—oh, excuse me, Mrs. Parmelee—I thought I was in the—the—*may* I help you to a little of the femur?"—*Puck.*

Hysterical or Simulated Blindness.—While hysteria may make a woman say and do almost anything, her vagaries in this condition do not often assume the shape of feigned blindness. I have, however, seen one such case. A young woman from Kentucky married an Ohio man and went with him to live in the central part of the latter State. She soon became homesick, and wanted to go back to her native place. The husband, of course, did not consent at

once to her entreaties, or as soon as she wanted him to, and she suddenly went blind—totally and absolutely so. She vowed that she could see nothing, not even the light. She had to be led about everywhere, and treated in every respect as one who had actually utterly lost the sense of vision, and had not yet attained the "second sight," or education of the other senses which so frequently takes the place of vision in a greater or less degree, with the truly blind who have been in this condition for any length of time. The husband had, of course, the most unbounded sympathy for the woman in her "affliction," and, after consultation with her friends, arranged to carry her "home to mammy," for whom she had been so grievously pining. As they passed through Cincinnati, the husband had her eyes critically examined, with the result that no cause whatever could be found for the affliction. She was in perfect health, and there was not the slightest functional or other visional disturbance discoverable with the most careful and painstaking scrutiny. Notwithstanding this, she persisted in her declarations that she could not even discern the difference between light and darkness. A gentle hint to the husband that she was shamming was hooted at, and the voyage Kentuckyward continued. For months she remained at home in the same condition of apparent blindness, requiring to be led about and treated exactly as one totally bereft of vision. Finally, from certain things which occurred, the truth of the hint given in Cincinnati began to dawn upon the spouse and relatives, and a little ruse was agreed upon. This was, in brief, to raise a sudden and terrible alarm of fire, and to leave the blind woman to take care of herself in the ensuing commotion. The result was that the blind woman got out of the burning building ahead of anybody else, and did not knock over a single obstacle that had purposely, though apparently carelessly, been left in the way. Her "blindness" left her as suddenly as it had come on, and didn't return, either.—*St. Louis Med. and Surg. Jour.*

On the Treatment of Sebaceous Tumors.—Many people, the subjects of congenital sebaceous tumors and "wens," object to having them removed, on the score that the remedy is worse than the disease, and the after-consequences may be serious. The following is the method I have adopted in such cases, and with marked success. With a cataract knife (Graefe's) puncture the cyst, and gently squeeze out

the contents; then introduce a very small piece of nitrate of silver. On the following day, by means of a pair of forceps, the capsule of the cyst can be withdrawn, just like the shell of a bean, without any portion being left adherent. In no case has there ever been any return of the growth or any ill effects. The method, if tried, will be found to have many advantages, apart from its simplicity and thoroughness. —*T. Murray Robertson, in Brit. Med. Jour.*

Book Notices.

A System of Obstetrics. By American Authors. Edited by Barton Cooke Hirst, M.D., Associate Professor of Obstetrics in the University of Pennsylvania; Obstetrician to the Philadelphia and Maternity Hospitals, etc. Volume I. Illustrated with Colored Plate and Three Hundred and Nine Engravings on Wood. Large 8vo. Pp. 809. Leather. Philadelphia: Lea Brothers & Co. Cincinnati: Robert Clarke & Co. Price $——.

This is another of a number of works, recently published, written, not by one individual, but by several medical gentlemen; or, as it is expressed in the preface, it is another "composite, systematic treatise on medicine." These "composite, systematic treatises" seem to be very popular. And, in fact, it is not strange that they should be; for it is reasonable to suppose that the various subjects which make up the department of medicine to which the work is devoted, have been distributed among the different writers with reference to the qualifications of each one to treat such as may be assigned to him. In a composite work upon practice, for instance, the treatment of fevers would naturally be given to a writer with whom it was known that such disorders had been a study of interest; diseases of the throat and lungs would be assigned to one who was generally recognized to have attained to great skill in their treatment, etc. A work on practice, prepared in this manner, possesses great value, in that in every department of it there are contained the matured thought and experience of one who has given it his best study, and is in no respect a compilation.

The contributors to the first volume of the *System of*

Obstetrics are Dr. Samuel C. Busey, of Washington; Dr. G. J. Engelmann, St. Louis; Dr Barton Cooke Hirst, Philadelphia; Dr. Wm. W. Jaggard, Chicago; Dr. H. W. Martin, Baltimore; Dr. Theo. Parvin, Philadelphia; Dr. R. A. F. Penrose, Philadelphia; Dr. J. C. Reeve, Dayton.

The first subject treated in the volume is the "History of Obstetrics," by Dr. Geo. Englemann, of St. Louis. It constitutes a most interesting paper of about seventy pages. He divides the History into three epochs: that of Empirical or Natural Obstetrics, Scientific Obstetrics, and the Antiseptic Period.

The use of anesthetics, he says, for the purpose of mitigating the pangs of normal labor, long customary in America, is gaining ground abroad. The Cesarean section, he declares, has become an established, fairly safe operation, and promises to replace, in part at least, that fatal relic of the bloody period of surgical obstetrics, embryotomy; and the high-forceps operation, which followed in the wake of the axis-traction instrument, encroaches upon the sphere hitherto retained by craniotomy.

The Antiseptic Period, according to Dr. E., extends from 1870 to 1888. This period is characterized by the introduction of the use of antiseptics into obstetrics, and by the almost complete disapearance of puerperal fever from the great lying-in hospitals. Cesarean section, as performed in this period, has a mortality of but seventeen per cent., and has become an established obstetric operation of acknowledged safety.

The work is beautifully printed on the very best quality of paper. The type is of a size easily read—being what is called small pica. To render it still more easy to the eye, it is leaded. In conclusion, we will say that the work needs no laudation. The high standing of the contributors to the first volume, in the medical profession, is a sufficient guarantee that it is one of great excellence, and fully and ably sets forth the obstetric art, as it is understood and practiced by the most eminent obstetricians of to-day.

PTOMAINES AND LEUCOMAINES; OR, THE PUTREFACTIVE AND PHYSIOLOGICAL ALKALOIDS. By Victor C. Vaughan, Ph.D., M.D., Professor of Hygiene and Physiological Chemistry in the University of Michigan, and Director of the Hygienic Laboratory; and Frederick G. Novy, M. S., Instructor in Hygiene and Physiological Chem-

istry in the University of Michigan. 8vo. Pp. 314. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: Robert Clarke & Co. Price $1.75.

We can give our readers probably a better idea of the object of this work by quoting the statement of the authors in the preface:

"Within the past ten years much has been said and written concerning the basic substances formed during the putrefaction of organic matter, and those which are produced by the normal tissue changes in the living organism. Many investigators have given their whole time and attention to the study of these substances, and important discoveries have been made, and much light has been thrown upon what have, heretofore, been considered problems in medical science. To collect, arrange and systematize the facts concerning ptomaines and leucomaines has been our first object. Although many short essays, some of them of great value, have been written with the above-mentioned object in view, the present work may be regarded as the first attempt to make this collation embrace everything of importance on the subject."

In endeavoring to make their work complete by presenting in it the results of all the various investigators, the authors met with not a few difficulties. They were compelled to search the pages of medical and scientific journals, transactions of societies, monographs, government reports, etc.

"How do germs induce disease? remained without a satisfactory answer," say the authors, "until it was discovered that they produce, by their growth, chemical poisons—ptomaines; that the absorption of these poisons is followed by the symptoms of the disease, and that each specific, pathogenic micro-organism produces its own characteristic poison. In infectious diseases the chemical poison is really formed within the body, but the active agent—the germ—causing the formation of the poison is introduced from without. It is, therefore, proper to speak of these diseases as having their origin outside of the body."

The treatment of these diseases, as stated by the authors, consists of attempts to destroy the micro-organisms which have already found lodgment within the body; or, failing in this, to antagonize the effects of the poison and to maintain life until the germs, weakened by successive generations of growth, or poisoned by their own products, cease to mani-

fest their ill effects, and the disease terminates by self-limitation.

A ptomaine is defined in the work to be a chemical compound which is basic in its character, and which is formed during the putrefaction of organic matter. The name was suggested by SELMI, who derived it from the Greek word meaning cadaver. All ptomaines are not necessarily poisonous; some are inert. Again, all poisonous substances formed during putrefaction are not ptomaines. Thus, phenol and hydrogen sulphide are poisonous products of putrefaction, but are not ptomaines.

All ptomaines contain nitrogen as an essential part of their basic character. Some contain oxygen, but others do not. Since all putrefaction is due to the action of bacteria, it follows that all ptomaines result from the growth of these micro-organisms. The kind of ptomaine formed will depend upon the individual bacterium engaged in its production, the nature of the material being acted upon by the bacterium, and the conditions under which the putrefaction goes on, such as the temperature, amount of oxygen present, the electrical conditions existing, and the duration of the process.

Until within a very recent period, the most of our readers, we presume, had never heard of ptomaines; and not a few, even now, probably, are not familiar with very much pertaining to them. They are, however, attracting a great deal of attention on the part of investigators, forming a new department of research. What constitute the causes of disease has always been a subject of intense interest, but it has always seemed to constitute a question that would never be unraveled. The microscope, however, of late years, has been doing splendid work; and it is now beginning to look as if we were about to have a flood of light thrown upon a number of subjects that, heretofore, were shrouded in dense darkness; and among them is this one in which is involved the causes of disease.

If physicians can know definitely the cause of a disease, will they not be able to treat it more intelligently? It certainly would seems so. As it is, with many affections, discussions are constantly going on as regards their proper treatment; and it seems that experience will never decide the question. We hope that which has been for a long time a reproach to the profession of medicine may soon be removed.

The work of Drs. Vaughan and Rovy, being the most complete of any yet published upon the subject of ptomaines, should be attentively studied by every physician. No topic in medicine is more worthy of attention than that which concerns the production of disease; and as ptomaines have certainly much to do in this way, physicians should feel a great interest in their investigation.

Intubation of the Larynx. By F. E. Waxham, M.D., Professor of Otology, Nhinology and Laryngology, College of Physicians and Surgeons of Chicago; Clinical Professor of Laryngology and Rhinology, Chicago Ophthalmic College. 8vo. Pp. 110. Chicago: Charles Truax, 75 and 77 Wabash Avenue.

Intubation of the larynx is a new operation, which has excited a great deal of interest in the profession. Not a few physicians seem to be of the opinion that it will eventually, in many affections of the larynx, supersede the operation of tracheotomy. But some regard it of little value—asserting that, in no instance, is it to be preferred to an incision through the larynx, and that in many cases it has failed where tracheotomy has been successful. Our author, however, is an enthusiastic advocate of its merits, and declares that it has fulfilled the expectations of its friends.

To Dr. Bouchut, of Paris, the author ascribes the credit for the idea of relieving stenosis of the larynx by a tube introduced by way of the mouth. To Dr. O'Dwyer, of New York, he says, belongs the great, the imperishable honor of reviving the operation, and by his ingenuity so modifying the instruments as to make them of practical utility. To himself, the author claims, belongs the less honor of assisting in the development of the operation, and of first introducing it generally into private practice.

A great objection that has been raised to intubation has been on account of the difficulty in swallowing. Children with diphtheria do not relish solid or semi-solid food—they crave liquids, and these they can not take on account of the violent coughing that they produce from dropping through the open tube. After quite a number of experiments, some of which were more or less successful, but not fully so, Dr. Waxham has finally invented a tube which he thinks has fully overcome all the

difficulties which stood in the way of the use of intubation on account of the trouble as regards swallowing. The tube which he has had constructed has a large head with a metal epiglottis attached, the latter being controlled by a spring of coiled gold wire imbedded in the upper part of the tube. In order to guard against sudden suffocation, in case any accident should occur to the spring, a slot is made through the head on each side and very near to its upper margin. This device, he says, works almost perfectly, and a child, if fed properly, can take any amount of liquid nourishment, or even water, with impunity. He considers it one of the greatest improvements that has yet been made in the advancement of the operation. By the use of these tubes, continues the author, we will not only add greatly to the comfort of the patient by permitting the administration of liquids, but he is convinced that we will save a large proportion of cases, and we will less frequently meet with broncho-pneumonia.

The work is a complete exposition of the merits of intubation, describing fully all the manipulations necessary for performing it skillfully and properly. In short, the little work is a monograph upon the operation of intubation, setting forth how it is performed; describing the instruments used, which are few; mentioning the diseases, and the signs attending them, which indicate the operation; the dangers attending them; how they are to be avoided, etc.

Recently, at a meeting of the Academy of Medicine, of Cincinnati, several gentlemen reported quite a number of cases of diphtheria in which intubation was performed successfully, saving the lives of the patients.

Editorial.

PROFESSIONAL COURTESY.—A recent number of the *Medical Record*, of New York, contains so good an editorial article on "Professional Courtesy," that we have felt disposed to copy it. As regards quarreling among members of the medical profession, we have no hesitation in asserting that there is no profession in which there is so little of it. Preachers quarrel and abuse one another, and lawyers make most scathing remarks in regard to one another. But here is the article:

"One hears so much about the jealousy of physicians, of their mutual backbiting, quarreling, and generally splenetic state toward each other, that it is really somewhat refreshing to learn that we are not in reality a disunited body. Our esteemed contemporary, the *Journalist*, for example, has recently celebrated our united state in the following somewhat ferocious terms:

"'There is not in this world to-day a more powerful, more monstrous, more unjust and iniquitous organization in existence than that mysterious bond which fetters the medical profession as with links of steel, which is known as "Professional Courtesy." Professional courtesy is an excuse for neglect, for procrastination, for carelessness, which is in too many cases tantamount to murder. It is no rash statement to assert that there are hundreds of cases known to physicians who are in other respects reputable men, where patients have died through the criminal neglect and stupidity of the attendant physician. Yet you could not worm an admission of that sort out of them in a court of law—they are bound by "Professional Courtesy" to allow their ignorant, incapable fellow-practitioners to go on murdering without a word of remonstrance.'

"Thus it seems that physicians do stand by each other after all. This is not very surprising, when one considers the difficulties and limitations of our art. When an architect miscalculates in building a bridge, his incompetency can be demonstrated mathematically, but when a chronic invalid with some obscure malady receives a series of prescriptions under which he or she gets no better, the incompetency of the physician is hard to prove. The malady may itself be impossible of recognition and of cure. Doctors know this. It compels them, if they have any sense of justice, to charity toward their fellows. We follow a difficult and laborious calling. There are black sheep everywhere, and sometimes, perhaps, 'Professional Courtesy' has been made to shield them. But we do not think that harm often comes from its exercise, and, indeed, medicine could not be practiced without it.

"In one respect our contemporary signally errs. He says: 'If you employ a physician to patch up the health of a member of your family, and you find after a reasonable trial that instead of building up he is tearing down, you can dismiss him and get another? Not much. Go and ask another physician to take the case and he will tell you blandly that

"Professional Courtesy" will not allow him to take another doctor's case, without the first doctor giving his permission, and if Number One chooses to be ugly you have a boycott beside which the boycotts of the labor organizations are mere child's play.'

"A patient who is dissatisfied with a physician has only to say, in as amiable terms as possible, that he has no further need for the latter's services. He can then engage any other physician that he wishes."

Oxalate of Cerium as a Remedy for Cough.—In 1859, Sir J. Y. Simpson introduced the oxalate of cerium for the vomiting of pregnancy, and it has been likewise used with some success in cases of epilepsy, having as an aura some gastric disturbance. In 1878, Dr. Clark, of London, first recorded its beneficial effects in chronic cough and shortness of breathing observed in several cases of phthisis, while it has also been used by Dr. Morjé with success in whooping-cough. In the *Medical Record* for June 2, 1888, Dr. Hobart Cheesman records his experience, which covers nine years, with the oxalate of cerium for the relief of coughs, and he states that in over half his cases the oxalate produced decided relief of the cough, and even of other symptoms. In some of them only moderate effects were apparent, while in a few the drug proved nearly or entirely ineffective. He has found that the oxalate of cerium has proved a remedy for cough in every stage of phthisis, but the best results are perhaps seen in irritant cough in the early stages. In chronic bronchitis it has been used with good results. In cough associated with an asthmatic condition in phthisis and bronchitis it may relieve both the cough and dyspnœa, and it has proved effective in spasmodic asthma. It has been used with some effect in whooping cough and bronchitis. He has never seen any dangerous symptoms attributable to the drug, although he has given twenty grains several times, occasionally, in one day. The sensation of dryness in the mouth and throat is the only unpleasant symptom noticed by the patients, and they cease to mind this after the drug has been taken a few days. Administering the drug dry seems to be the most satisfactory method, and the effects seem better when it is given on an empty stomach and in fairly large doses, rather than the same quantity distributed in smaller ones. The initial

dose should be five grains, given early in the morning or at bed-time, or both; or intermediate doses if required; and it may be increased, unless relief is obtained, to ten grains or more several times a day.

A Medico-Legal Case.—The following case of suicide which recently occurred in Jamaica presents features of considerable interest and no little importance. A colored man, after murdering his sweetheart, entered his house, and cut his throat with a razor. Some of the neighbors who had witnessed both deeds rushed into the house, but were unable to find him. After a search, his dead body was found under the house, which was a small one, built on supports, raising it about two feet from the ground. After cutting his throat, the man must have walked or run to the back entrance, a distance of sixteen feet, and then have crept through a hole in the partition, and have crawled on all fours to the spot where his body was found, exactly beneath the room where he cut his throat, and, therefore, a further distance of sixteen feet. The throat was cut from ear to ear by a clean sweep, both carotid and jugular being severed, as well as the trachea and œsophagus, the wound reaching back to the anterior portions of the bodies of the cervical vertebræ. A blood-stained razor, which was deeply notched, was found in the room, and marks of blood were traced from the room to the back entrance by which the man must have gone out.

Dr. Cargill, who examined the body soon after death, and to whom we are indebted for a report of the case, was asked by the coroner if it was possible for a man to have traversed the thirty-two feet after inflicting such wounds on himself; to which he replied, by declining to controvert, as a mere matter of medical opinion, facts that had been sworn to by reliable eye-witnesses. Remarkable instances of the retention of voluntary power after wounds of the carotid artery have been occasionally recorded, but we know of no occasion on which the vessels on both sides of the neck were divided, where so much power was retained by the subject of the injuries as in the present instance. The case should serve as a perpetual warning to medical men not to be too dogmatic as to what is, and what is not, possible even in the presence of the most rapidly fatal wound.—*British Medical Journal*, June 30, 1888.

SMALLPOX.—The *Philadelphia Medical News* states that it learns, through the Health Officer of Philadelphia, that since the middle of March last to the middle of July there has been, in that city, slightly more than two hundred cases of smallpox, with a death-rate of not quite twenty-five per cent.—an average mortality.

We agree with our contemporary that it is visionary to expect that smallpox will ever be extirpated from the list of diseases to which the human family is liable. There will always be enough of persons liable to it to keep up the source of the disease.

Vaccination is undoubtedly a perfect prophylaxis, if properly performed, but it will always be impossible, especially in this country, to compel every person to make use of it, and, consequently, many will neglect it. But of those who do employ it, there will always be large numbers who will not be properly vaccinated, and these will swell the number who will be predisposed to smallpox.

We hold that in order for vaccination to perfectly protect against smallpox it must be repeated in an individual until it no longer produces its characteristic phenomena. When this has been accomplished, we believe that its protective influence will continue during life, if the person has passed the age of puberty at the time of securing it. If, however, the subject is a child when vaccination is performed and repeated until it has impressed the system, we are not sure but that the impression may be lost by the changes wrought by puberty, and we are of the opinion, consequently, that vaccination should be performed after puberty and repeated if it is not found "to take." After *saturation* a second time there need be no fears that the party will ever take smallpox, however much he may be exposed.

The popular belief that vaccination "runs out" every seven years is an error. We know physicians who, having vaccinated themselves at the time of entering upon practice, and repeated it until it would no longer "take," have found that they possessed complete immunity from smallpox afterward during many multiples of seven years, though called to hundreds of cases of the disease, many of which were of a very virulent character. It is probable, however, that the large majority of persons that are vaccinated, are never revaccinated.

Many physicians are of the opinion that immunity from smallpox is secured if the characteristic cicatrix of vaccina-

tion has been produced. This is a mistake; for we have seen very bad cases of smallpox in persons whose arms had on them well-marked vaccination scars. Only revaccination until the phenomena of vaccination no longer follow will make a person secure beyond doubt.

Decease of an Eminent and Highly Respected Physician.—Dr. A. Y. P. Garnett, who presided over the meetings of the *American Medical Association* when it met in Cincinnati last May, we greatly regret to announce, is dead. While attending the Association he impressed every one most favorably and made many friends. We can see before us his tall, slight form and pale face as he stood behind the desk when presiding at the general meetings. While seeming to possess great suavity, yet his bearing was most dignified. We clip the following account of him from an exchange:

"Dr. A. Y. P. Garnett, of Washington, died at Rehoboth Beach, Delaware, on Wednesday night, July 11th, of heart-failure. He had been severely ill for several days, and was believed to be slowly convalescing. He left Washington for the seashore, on the morning of his death, for the purpose of recruiting his failing health.

"He was born in Virginia, in 1820, was graduated in medicine at the University of Pennsylvania in 1841, entered the United States Navy as assistant surgeon the same year, was promoted to surgeon in 1848, and resigned in 1850 in order to accept the Professorship of Clinical Medicine in the National Medical College of Washington. At the breaking out of the war he left Washington and attached himself to the medical staff of the Confederate Army. At the close of the war he returned to Washington, and was again elected a professor in the National Medical College. In 1887 he was elected President of the American Medical Association, and presided at the late meeting in Cincinnati." He married a daughter of the late Ex-Governor Wise, of Virginia, in 1848.

Effects of Anæmia on the Gaseous Chemical Change.—In order to determine the effect of acute anæmia on the gaseous chemical change, or gaseous metabolism as he calls it, Dr. M. F. Kandaratski, of St. Petersburg, has experimented on a number of dogs by abstracting a portion of the blood, thus producing a condition analogous to that of acute anæ-

mia, and estimating the gaseous change before and after the operation. His idea was to discover whether the intravenous injections of defibrinated blood, saline solutions, etc., in acute anæmia act in a chemical manner by restoring the gaseous metabolism which may be supposed to be lessened by the diminution of the red corpuscles. The observations made showed that, whether a small quantity of blood, equivalent to twenty-nine per cent. of the whole, or a large amount equal to sixty-two per cent., or in one case to seventy-three per cent. of the whole, was abstracted, no alteration was caused in the gaseous chemical change. His experiments were conducted with great care, each observation lasting for three days, and the mean of two observations being taken. He was also careful to eliminate any error that might arise from food.

The Poor and the Rich.—We clip the following from the *Western Druggist*, indorsing it:

"From a humane and consistent point of view, taxes of any kind levied upon articles of necessity have always been considered unjust. As the needy poor outnumber the well-to do, to say nothing of the independently rich, in the ratio of 19 to 1, the question involved within the scope of the query is one which invites the earnest attention of every man who is kindly disposed toward the sick and distressed. Statistics conclusively prove that the proportion of sick among the poor because of exposure, lack of food, and improper care, is much greater than obtains in the middle and higher classes. Then, for the sake of simple and wholesome charity, such articles as are used solely or mainly for medicinal purposes, should by all means be placed on the free list."

Medical men in Medina, N. Y., and thereabout, are interested in the case of Mrs. George Jackson, who survives with a broken neck, sustained by falling from a wagon. At last accounts she was able to talk, and was perfectly rational; her body below the shoulders was completely paralyzed. The doctors feared to attempt to make a complete examination or reduce the fracture, which is among the cervical vertebræ, lest it would snap the spinal cord.

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Original Contributions.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

PHTHYSIOGENIC PLEURISIES—A LECTURE, BY PROF. JACCOUD.

A MAN twenty-eight years of age, habitually enjoying good health, is suddenly seized, on the night of the 22d to the 23d of January, with an ensemble of grave symptoms: chill, fever, great prostration, difficulty in breathing, vomiting and diarrhœa. The following day the diarrhœa persists; the vomiting recurs at frequent intervals; the diarrhœa is more abundant, and the difficulty of respiration is greatly augmented; furthermore, a cough has made its appearance. The third day, same symptoms; however, vomiting and diarrhœa less frequent; but, on the other hand, the patient suffers such severe pain at every attempt at breathing, and is so harassed by the cough, that he determines to enter a hospital. On the morning of the fourth day diarrhœa and vomiting have ceased, but the patient is in a restless state; his evening temperature is 38.6° C.; the difficulty in respiration is characterized more by the pain experienced in breathing than by the frequency of the respirations. His cough is peculiar, in that it is dry, paroxysmal, jerking, frequent; in that the paroxysms come on on the least movement made by the patient in the bed; in that it is especially intense when he lies on his left side, and quieter when he lies on the right side, and, finally, in that it is provoked or augmented by the slightest pressure made on the thorax, at the level of the last ribs.

Direct examination of the chest reveals nothing abnormal on the right side; on the left, in front, everything normal likewise, but laterally and posteriorly there is found dullness in the lower fourth, and, though the respiratory murmurs are heard everywhere, the friction sounds are apparent only where the sonorousness has undergone change.

The functional and physical signs accord in demonstrating, in an indubitable manner, the existence of a dry pleurisy in the postero-lateral part of the left side of the chest, in that portion of the pleura which is *en rapport* with the diaphragm. Defervescence occurred on the day following his admission—that is, on the fifth day after the appearance of the morbid symptoms—and convalescence and recovery followed with the greatest facility, without the occurrence of any disturbing incident. Eight days afterward no thing is found but traces of inflammation in the form of a but slightly pronounced exudate, whose presence is revealed by the dullness, by the rudeness of inspiration, and by the retraction, at the moment of inspiration, of two intercostal spaces in the postero-inferior portion of the left side of the chest.

Despite its apparent triviality, this observation furnishes a text for several interesting considerations relative to the semeiology, the prognosis and the treatment of the form of pleurisy here detailed. We are struck at once by its stormy, violent beginning, out of all proportion to the restricted localization and minimum gravity of the anatomical lesion; for at no time did the least trace of fluid exist in the cavity of the pleura. The fact is sufficiently frequent in the explosion of acute maladies. When these set in suddenly, their debut may be marked by an ensemble of symptoms which is very disquieting, whilst the localization which is in preparation is neither extended nor grave. We must always bear this possibility in mind, so as not to become unnecessarily alarmed until an exact diagnosis has been made.

In the second place, it will have been observed that the symptomatology is not in absolute conformity with that habitually assigned to diaphragmatic pleurisy. Certainly, vomiting is a very common symptom when the pleurisy involves, directly or indirectly, the diaphragm, and this is readily explained by the influence of the phrenic nerves which anastomose with the pneumogastric. But it is not so with the diarrhoea, which is altogether foreign to acute inflammations of the pleura, whatever be their seat, and which in the case here related persisted for forty-eight hours

with such an abundance as to almost mislead in the diagnosis.

It was, however, only a fortuitous coincidence; a complication altogether foreign to the pleurisy, resulting from the fact that the cold acted on the bowels at the same time and in the same manner as it did on the pleura. And it was, furthermore, very easy to be mistaken as to the nature of the affection—at least, during the first two days—because the painful point (the point *de cote'*) in the intercostal region was altogether wanting; he had the clear, precise characteristics of a diaphragmatic pleurisy, but he had no point *de cote'*. This absence is rare, but still it may occur as is shown by this case and by several others which I have observed; we must therefore conclude that this last symptom has no absolute value, is not absolutely necessary even in pleurisies located near the diaphragm, and contrary to what has been written on this point. On the other hand, that which is never wanting in pleurisies of this form is the special character of the cough; it is dry, paroxysmal, fatiguing, as in all pleurisies at the outset, and, furthermore, is provoked by even the slightest pressure on the attachments of the diaphragm; the influence of this slight pressure on the cough should always direct our attention to the base of the thorax, and we can be sure when it exists that direct examination of the chest will corroborate the presumptions its presence gives rise to.

So much for the semeiology. Now, as to the prognosis. Certainly, as to the *immediate* prognosis the same is as favorable as it can possibly be, since the patient recovers completely, and presents nothing more than a limited fibrinous exudation. It is not the same, however, as to the future prognosis. This remains doubtful by reason of this exudation, which may be the origin of pleural adhesions, and especially by reason of the very close relation existing between pleurisy and pulmonary tuberculosis. These relations are known to the whole world; but it is generally believed that it is only pleurisy of the apices which should lead us to think of the possible development of tubercles; but this a positive error; any pleurisy, no matter what its seat, may precede and prepare for the appearance of tubercles. And, moreover, the essential characteristic of these phthysiogenic pleurisies, as they had been described by Jaccoud in 1882, and which further observation has verified, is to occupy the inferior region of the pleura in its antero-lateral portion

(more rarely posteriorly, as in the case here); to occupy the left side (it is only very rarely that they occur on the right); to remain dry generally, or to give rise to but a moderate amount of effusion, so that it almost always terminates by adhesions, to pursue an apparently very favorable course. The individual recovers rapidly, perhaps with a certain diminution of his vital forces; this is the first stage. At the end of several weeks, or of several months, he is sick again. After a debut more or less marked, there is found about the region of the pleural adhesions a pneumonic focus, which, if the explosion be wanting, if its course be insidious, does not compel the patient to keep his bed. This focus turns rapidly into excavation, and becomes what was formerly called caseous pneumonia, at the period when the duality of pulmonary phthesis was still admitted. Sometimes there are observed, at a little distance, small pneumonic foci similar to the first, which do not at all modify the general evolution of the malady, which has now arrived at its second stage: the pneumonic stage. Finally, if the patient survives several months, there may be a third stage, represented by an expulsion of pulmonary granulation more or less generalized.

What is the pathogenic *rapport* existing between these pleurisies terminating in adhesions, and the formation of a pneumonic, which is, on the whole, tuberculous? It is explained by the fact that the portion of the lung fixed to the costal wall by adhesions has lost its faculty of expansion, and takes but a feeble part, or none, in the process of respiration; furthermore, the circulation of the blood in this part of the lung is but poorly accomplished; the vessels being compressed by the pleuro-costal bands, sanguineous congestions are of frequent occurrence, consequently the nutritive action undergoes a diminution very favorable to the pullulation of bacilli, who fix themselves in this part of the lung at a time when direct examination shows the apices to be perfectly normal.

The practical conclusions to be drawn from the preceding are the following:

The existence of a diaphragmatic pleurisy is demonstrated more by the peculiar character of the cough, which is provoked by the least pressure on the thorax, than by the painful costal points, point *de cote*, which may at times be altogether wanting.

A pleurisy may lead to tuberculosis when it occupies the inferior portion of the pleural cavity as well as when it occu-

pies the summit, and this is more particularly true of dry pleurisies, terminating in adhesions, which occupy the antero-lateral portions of the left side, and which, more than all others, are phthysiogenic.

When confronted with these pleurisies we must not allow ourselves to be deterred from active treatment by their apparent benignity and the rapid recovery of the patient.

The principal danger of the future is located in the pleuro-costal adhesions. It is these which treatment must hold in view. The best means, the only one in fact at our disposal, to prevent the formation of these bands of exudative matter consists in the application to the chest wall, as soon as the friction sounds are heard, of a very large blister, one covering a much greater territory than would appear necessary from the extent and intensity of the affection. This method succeeds frequently, but not always; if it has proved fruitless, if the exudation has occurred and the bands have formed, we must seek to stretch them, to lengthen them out, in order to lessen their injurious influence on the circulation and nutrition of the lung. To accomplish this we have a most precious resource in aerotherapy, the usual procedure of which is to make the patient inhale compressed air in fixed apparatus; we obtain also a widening of the folds of the pulmonary vesicles, an augmentation of the capacity of the lung, which may make a victorious struggle against the evil influence of the adhesions. But the essential condition of success is that the treatment be prolonged, that it be continued uninterruptedly for several weeks; nothing is obtained by four or five sittings.

Another procédure of aerotherapy consists in that the patient inspires in compressed air and expires into rarefied air. At each expiration the lung empties itself to the maximum, retaining nothing but the strictly residual air. To the advantages derived from such complete expiration there are superadded the advantages derived from the penetration of compressed air into the remotest air vesicles of the lung. But this method, beside being very fatiguing to the patient, exposes to the dangers of hemoptysis; it should therefore be employed only in cases that are not enfeebled, and that have had no bloody sputa; in other cases we will limit ourselves to the inhalation of compressed air only, which most frequently suffices to prevent the development of bacilli, provided that the remedy has been applied at the proper time, at a sufficiently early stage.—*U. M., U. M. d' Can.*

The Relationship of the Teeth to the General System.

BY ANDREW G. FRIEDRICHS, M.D., NEW ORLEANS.

THE frequent display of ignorance on the part of medical men has prompted me to collect a few facts and endeavor to impress upon the profession the necessity of considering the importance of the teeth; that they are an important factor and play a conspicuous role in preserving the human organism in a state of health. The teeth seem to be regarded by most practictioners as mere pegs inserted in the alveolar processes, to serve simply as masticators of food, forgetting that they are living organisms, being supplied with nerves, arteries and veins, which likewise sustain relations with the system in general. I think it is about time that the profession should appreciate this fact. Until they do they will endeavor in vain to point out the causes of obscure diseases, simply because they have sought for them everywhere but in the right place. Still, the teeth are regarded with indifference, and why is it? To insinuate that it is a subject of no importance to us would hardly be tenable; to suppose that their importance is not recognized is less so; to assert that they play no part in the economy is even less so; and to call all my confrères ignorant would not be justifiable. Nevertheless, the fact stares us in the face that they rarely receive any attention, and the only palpable solution is simply that such is due to criminal neglect in some, or, what is worse, to an unwarrantable ignorance in others, who, I am sorry to confess, compose the majority.

Consider with me for an instant what important functions these organs are called upon to perform, and what a powerful morbific influence the teeth and their contiguous parts must unavoidably produce on the general constitution. How they are supplied with nerves, their attendant ganglia and plexuses; their position in the maxillary bones (on each side of the oral cavity); their relationship to the antrum, which is again in contiguity to the nasal fossæ. The posterior lower molars are but little removed from the tonsils, *Eustachian* tubes, the parotid region and the external and internal ear. The roots of the upper back teeth are near to the orbit and its important contents; more posteriorly they approach the spheno-maxillary fossa and

fissure, all of which are frequently the seat of dental disease.

The gums and teeth, very often, are valuable aids as a means of diagnosis in hereditary syphilis, scrofula and the various pathological conditions of the gastro-intestinal mucus canal.

During dentition, a period so fraught with danger that seven per cent. of the deaths are ascribed to teething, we can fully appreciate this, when we consider at this epoch, how much the spinal predominates over the cerebral system, when the slightest irritation could produce the most fatal results; for that which causes a shudder in a man, would probably throw an infant into convulsions. The symptoms of dental irritation may, then, be and are frequently confounded with congestion or inflammation of the brain; and full well we know what would likely be the result of a failure in a correct diagnosis.

I will mention a few of the maladies which are dependent upon, or synchronous with the eruptive period, to-wit: Cholera infantum, diarrhœa, constipation, increase or decrease of urine, convulsions, transient paralysis of the arms and legs, insomnia, marasmus, etc. Nor are the latter periods in life more free from diseases connected with the teeth.

There is no affection that is of greater importance to us than neuralgia, certainly none more annoying to our patients.

Suppose we call to mind the extensive sympathetic connections of the trigeminal nerve, it will not be strange to us that any portion of the neck, face, throat, or any of the *associated* parts that are supplied by the nerve itself, or any of its related nerves, should be the seat of reflex trouble from a diseased tooth.

But recently, a gentleman came to my office, who was suffering from a most agonizing pain shooting from the orbit of one side, across the forehead, to the other. This neuralgia had continued for two months, during which time he had hardly had any rest, had eaten hardly anything, and when I saw him was quite emaciated. He had been under the treatment of physicians, quacks, homœopaths and a hydropath, but with no relief. He never complained of the slightest pain from his teeth; however, on examining his mouth for a cause, I discovered a semi-decayed, dead posterior superior bicuspid, with no connection between

the cavity of decay and the pulp cavity. With a spear-shaped drill I established a connection between the two cavities, and relief instantly followed

The cause of this neuralgia was the compression by gases evolved from the decomposing pulp upon the dental nerve.

Dr. Johnson speaks of a case of a well-known physician who was forced to relinquish an extensive practice, as a consequence of a tic-douloureux caused by an osseous excrescence growing from the dental wall.

Dr. Emmaich reports a case in which a man consulted him on account of a painful affection of the eye, which had lasted fourteen years and occasioned great suffering. There was considerable vascularity of the conjunctiva and sclerotica, especially around the cornea, which structure itself was somewhat opaque and spotted. There was a continual flow of tears, with pain and intolerance to light. All these symptoms were aggravated by any indiscretion in diet, or by the use of the slightest stimulant, such as a glass of wine. All kinds of remedies had been tried in vain at different times and the affection seemed incurable.

Dr. E., upon examining the upper jaw, discovered an extremely sensitive *carious* tooth on the side corresponding to the afflicted eye. The tooth was extracted and immediately afterward the eye symptoms subsided.

The affection of the eye evidently was the result of sympathy between the second and the third branches of the fifth pair of nerves.

Dr. Trudeau, of Paris, mentions an instance where insanity was caused by a diseased tooth. He says: "Mr. Equirol told me he had cured a young lady, who was insane, of her mania, by the extraction of a second molar tooth, which was preventing the growth of a wisdom tooth."

Epilepsy has resulted from dental irritation. "Some time in the year 1801," says Dr. Rush, "I was consulted by the father of a young gentleman in Baltimore, who had been affected with epilepsy. I inquired into the state of the teeth, and was informed that several of them in his upper jaw were very much decayed.

"I directed them to be extracted, and advised him afterward to lose a few ounces of blood at any time, when he felt the premonitory symptoms of a recurrence of his fits. He followed my advice, in consequence of which, I had

lately the pleasure of hearing from his brother that he was completely cured."

Likewise general paralysis has been brought on by the same cause. I will cite a case reported in the *London Lancet*, by J. L. Levison, of Brighton:

A young lady was brought to his residence, in a carriage, to have her mouth examined. On being removed, she was supported on one side by a lady and on the other by a man-servant. Her entire muscular system seemed paralyzed. Her legs trailed on the ground like useless appendages. Her arms, when unsupported, fell powerless immediately. Even the muscles of her tongue were paralyzed, and, in her effort to speak, this important organ remained in a quiescent state.

On examining the mouth, a dens sapientiæ of the lower jaw, very carious and deeply imbedded in the temporal muscle just below the coronoid process, was perceived, in which locality there was an extensive inflammation.

Extraction was suggested, and though some advantage was anticipated, the actual result was surprising. She instantly obtained the free use of her tongue, which she immediately used to communicate the important fact that ever since the extracted tooth had been forcing its way through the gums, she could date the gradual loss of power over her limbs. One month after, the complete use of her limbs was restored.

About two months ago a case similar to the above came under my observation, presenting all the paralytic symptoms except that of the tongue. She had likewise been a sufferer for several years, during which time, being a lady of means, she had availed herself of the services of gentlemen of recognized ability, both of this city and elsewhere, whose efforts, however, failed to afford any relief or arrest the progress of the malady.

Upon examination of the mouth, the teeth were diagnosed as the source of the trouble. All of those organs in the superior maxilla were found in a very carious condition, and the gums surrounding them were very much inflamed. Pus exuded from them upon the slightest pressure. Extraction was recommended; after the performance of this operation, recovery, both rapid and complete, ensued.

Sir Astley Cooper speaks of hemiplegia being cured by the extraction of a tooth.

Catalepsy has resulted from toothache. A plow-boy, who had complained of toothache in the morning, half an hour after commencing work was found lying a short distance from his plow, apparently dead. He was carried home and a physician sent for, who, after a careful examination, concluded that the affection must have been produced through the dental nerve. The tooth was extracted, and the boy immediately got up and expressed himself as being as well as ever.

Dental abscesses have frequently been mistaken for scrofula. I positively know of a case of this kind being diagnosed as a cancer by a prominent surgeon of this city. The gentleman referred the patient to five other surgeons, so positive was he in this belief. All but one confirmed his diagnosis. The dissenting one advised her to see her dentist and ask his advice.

The patient's mouth was examined. An impacted root was found, which was extracted. In one month all traces of this supposed cancer had entirely disappeared.

There is a case of pyæmia, caused by dental abscess, which is very interesting, and I will report it in detail.

"M. C. W., aged four years and a half, was admitted to Guy's Hospital, under the care of Mr. House, on September 30, 1874.

"The family history was good, except that there was some account of a tumor in the grandmother. The child had been a healthy boy six weeks before his admission, when he came from school with a bad attack of diarrhœa.

"A few days subsequently he was much frightened by a fire, and it was within a short time of this that his left eye was noticed to swell. In a fortnight the other did the same, but no notice was taken of it; he gradually grew worse, and for three weeks prior to his admission, he was in a drowsy state.

"On admission he was delicate and vacant-looking. The left eye was much more prominent than the right, with thickening along the upper margin of the orbit. Beneath the edge, under the eyelid, was a hard, cartilaginous, freely movable body, which reached backward apparently into the orbital cavity above the eyeball, while it extended downward into the eyelid.

"The movements of the eyeballs were perfect and sight was unaffected. The temperature was 104.5° in the morning and 102.7° in the evening; pulse, 160.

"He was seen by Dr. Fagge, who could discover no cause for the elevation in temperature.

"Dr. Fagge thought, however, that as the roof of each orbit was evidently affected, and the boy tottered as he walked and was peculiarly torpid, the disease, whatever it was, had extended from the orbital fossæ to the cerebral hemisphere.

"The ophthalmoscope revealed only large and tortuous veins, with a small hæmorrhage on the outer margin of the right optic disc. The temperature remained high, and he rapidly became much worse, losing control over his evacuations, and he died nine days after his admission."

The autopsy showed on the right side that pus extended all over the outer side forward, and appeared externally over the superciliary ridge, while it passed backward through the optic foramen and sphenoidal fissure; underneath the cavernous sinus, across the *sella Turcica* and grooves for the optic commissure; through the right optic foramen and right sphenoidal fissure; all this beneath the dura mater of the base of the skull, the bone itself being rough and carious, and part of the body of the sphenoid infiltrated with a grumous, chocolate-colored pus. Thus, it appeared the right orbit had become affected after the left orbit; pus was traced into the spheno-maxiliary fossa, and thence to the condyle of the lower jaw. The articulation was free, but the whole of the condyle and much of the ramus on this side was bared of its periosteum, and pus lined the inferior dental canal as far as the first molar tooth, which was decayed, lying loose in its socket and with carious bone about it. It should also be said that, though the pus so closely surrounded the cavernous sinus on each side, yet the *sinuses* were quite unobstructed. So also was the longitudinal sinus, though its walls were very much thickened. The frontal sinuses were normal. The lumps felt during life over the left superciliary ridge consisted of a tough, opaque, yellow mass, very much like some lymphomata as seen in the neck, or like some gummatous matter. It certainly had all the microscopic appearances of some new growth, but, after further examination, it was evidently of an inflammatory nature. Its precise situation was from the *lachrymal* duct externally to the inner margin of the orbital ring, and it lay half protruding from and half within the orbit, and adherent to the bone, which on its removal was bare of periosteum.

There can be no doubt from the *post-mortem* appearance, that the source of all this mischief was a decayed tooth. It had led to caries of the bone, to suppuration in the inferior dental canal, and thence the pus had followed the course which has been described. It is a good illustration of the bad results which may follow a slight amount of mischief in an unhealthy subject, and is remarkable in that there is no history of toothache, swelling or other trouble about the jaws. Excepting a bad attack of diarrhœa, the first symptom noticed was swelling, first of one eye and then of the other. Notwithstanding that, by the time the second eye was affected, as shown by the inspection, there must have been considerable suppuration at the base of the skull, about the pituitary fossa, and very probably about the vault also, the disease at its onset must have been peculiarly insidious, and the pyæmia of late accession, within a few days of his admission.

In one of the numbers of the *Bibliotheque Germanica Chirurgical*, there is an account by Dr. Seebold of a young woman who had been affected for several months with great inflammation, pain and ulcers in her right upper and lower jaws at the usual time for the appearance of her catamenia, which were always deficient in quantity. On inspecting the seat of trouble the doctor found two decayed molar teeth, which he directed to have drawn, in consequence of which the patient was relieved of her monthly disease of the mouth, and ever afterward had a regular discharge of her catamenia.

Amaurosis has been known to have been produced by the overcrowding of teeth in the maxilla. Even sciatica has been said to have been cured by the extraction of a tooth. A great many of the tumors of the maxilla, from a simple abscess to an odontome, have their origin in a diseased or impacted root, which, if only recognized in their incipiency, how easily could the remedy be applied and the disease cured.

These facts, though but little attended to, should not surprise us when we recollect how often the most distressing diseases are brought by very inconsiderable inlets of morbid excitement into the system. A small tumor, concealed in the fleshy part of the leg, has been known to bring on epilepsy. A trifling wound with a splinter or a nail, even after it has healed, has often induced a fatal tetanus. Stone in the kidney has excited most violent commotions in every

part of the system. Certain mental states affect certain functions in certain definite ways. Sudden anxiety may cause increase of peristaltic action, and joy diminish the gastric secretions, and cause a loss of appetite. Hundreds of facts of a similar nature are to be found in the medical records.

It is surprising, then, that the teeth should often be the unsuspected cause of general and particularly of nervous diseases? Consider how often the teeth are exposed to irritation from hot and cold drinks and aliments of all kinds. What morbid effects would likely arise from the putrid and acrid discharges from decayed teeth and diseased gums, when introduced into the stomach. I may also add, what influence these organs have upon perfect mastication, when in a pathological condition; and again, the connection of mastication with good health. Imperfect digestion must follow, and you rarely find a person whose teeth are in a diseased condition, who is not a sufferer from dyspepsia, a disease which daily baffles the efforts of the doctor to cure, and few there are who have not experienced the sensations so graphically described by Cowper:

> "I awake like a toad out of Acheron,
> Covered with the ooze and slime of melancholy."

It is not strange that diseased teeth should produce dyspepsia; it is easily accounted for. In the first place, the food is improperly prepared for the stomach; secondly, the fluids of the mouth, constantly trickling into the stomach, impair its tone and vitiate its solvent secretions; and thirdly, a continual demand upon the system by the vain efforts which nature makes to cure the diseases of the teeth, and also the frequent and severe pain, diminish the nervous influence which the stomach receives, and impairs its powers.

Now, I have no doubt that our success in the treatment of a great many, if not all chronic diseases, would be greatly promoted if we would only direct our inquiries to the condition of our patient's teeth—advising their treatment when diseased. It is not necessary that there should be the slightest pain, or even one symptom, that would attract our attention to the offending organ. Splinters and tumors and other irritations have caused disease and death, and were unsuspected as the cause. Translation of sensation and motion from parts affected to parts remote seems to be an original law in the animal economy.

All this is no issue of yesterday. Tissot, who wrote nearly a century ago, was fully aware from observation and clinical experience of the great importance of diseased teeth to the general health. He described toothache, as resulting from gout and rheumatism, as producing disorders of the stomach and noxious matters, which, according to the pathology of his time, was the mode of expressing what is meant by constitutional disorders.

It also must not be forgotten that the teeth are often made the tools for the other organs. They are just as liable to be the objects of sympathetic irritation, and in the absence of adequate knowledge of the cause of pain, have been condemned for the faults of their fellow-organs.

Toothache has resulted from constipation of the bowels. Gout is frequently ushered in with the most terrific dental suffering.

Dr. Cartwright speaks of a gentleman suffering from hemorrhoids who always had an acute pain in his upper molar teeth, but which invariably ceased when a hemorrhage relieved the engorged vessels.

The foregoing cases are but a few of the great number that might be collected, showing the importance of the teeth, in healthy and unhealthy conditions, to the welfare of the whole system.

They will certainly be sufficient to arouse the physician to the necessity of regarding the agency of these organs when diseased in the production and continuance of disease. It is, nevertheless, strange that physicians have paid so little attention to so important a subject, when such men as Hunter, Rush, Halford, Chapman, Garretson, and many others, have taken special pains to call attention to its importance, but in spite of that they have gone unheeded. In our recent text-books this subject is barely mentioned. I can see no other reason than that the teeth are objects that are visible to the naked eye, and on that account were considered as undeserving of notice. Were they but microscopical objects, they doubtless would have received their due consideration. Particular attention should be given to the teeth of any individual suffering from any of the acute febrile affections. In the first place we have, as we all know, a complete suppression of the salivary secretion and a deposit upon the surface of the teeth and tongue of hardened masses of mucus. Now, should its removal be neglected, or, as is the general rule, that absolutely no attention is paid to it,

we find at the moment of convalescence, when we remove these masses, that the teeth are covered with carious spots or furrows, and in some instances the caries has progressed to such an extent as to place the teeth beyond the vail of redemption, the result of either neglect or ignorance, and in each case equally culpable is the individual upon whom rests the responsibility of their preservation.

The dentist is never consulted in such cases until the patient, after suffering days, in some instances weeks, intense agony, comes, anæmic and emaciated, relating how much he has suffered and how many sleepless nights he has passed, to have some aching tooth extracted; the same individual will tell you that prior to this last attack he never knew what it was to have an aching tooth.

Among children the case is more serious. To see those little ones suffering, and especially where extraction has to be resorted to, knowing that the very remedy for their relief would be most apt to entail upon them future misery, is sad, indeed. In these cases the care of the teeth is intrusted to the attending physician alone, and he should exert his best efforts to preserve them. No consideration whatever should so absorb his attention as to neglect to give to them their proper share. The cases which I have above recited are not exceptional, nor by any means rare, but are of daily occurrence, proclaiming in thunder tones the necessity of more thorough knowledge, regarding dental pathology, among general practitioners of medicine, to whose care are intrusted the well-being and happiness of many of our fellow-beings. Yet the fault lies beyond the physician; his education and training were sadly neglected by his *Alma Mater*, though she was quite solicitous in fortifying him with knowledge pertaining to all the other specialties.

One by one medicine has enlarged her curriculum as the progress of the science has demanded. The theory and practice of medicine composed at one time all that was deemed necessary or honorable. All the other departments of the healing art have gradually won their way to their present position and importance. There was a time when surgery in all its branches was regarded by physicians with sovereign contempt. Barbers were the operators, and mountebanks and old women dressed the sores. Midwifery, if possible, was held to be still more despicable, and within the present century an eminent body of scientific physicians declared obstetrics to be unworthy the attention of a polite

gentleman. Thus, has the circle of her usefulness ever extended, and to-day, oral surgery, established as a distinct and proper specialty of medicine, requires that she should receive consideration as such, and no course in medicine is complete without relative instruction in this department. No medieal school should be without a chair devoted to the interest of this specialty.

Before concluding, I can not refrain from mentioning what indiscretion some medical men display when asked by their patients to select for them a dental operator. They must consider one man equally as competent as another, or they do not fully appreciate what irreparable damage may be done by an ignoramus. I frequently see at my office patients who have been recommended to well-known quacks, who had put the former's teeth in a most deplorable condition, and in some instances beyond redemption. Certainly, cases of this kind reflect most discreditably upon the intelligence of medical men who should have known better. They not only have betrayed the trust confided to their judgment, but caused unnecessary pain to the afflicted; had the system put in a condition less capable of resisting disease and aggravated existing maladies; conspired in a manner to rob the unsuspecting both of time and money, and finally lowered themselves in the estimation of their clients, of their confrères and of all men who have any appreciation of decency and of respect.

Allow me to ask, would any respectable physician think, aye, ever dream, of sending his patients to any but a competent and reliable oculist or surgeon? Then, with due deference to suffering humanity, the physician should consider it his bounden duty to select none but proficient, trustworthy and skillful oral surgeons.

In conclusion, I fully coincide with Dr. Fitch, who rightly and ably remarks: "We are not to contemn the diseases of the teeth, because they seem insignificant. Many persons are formed of a fibre so fragile as to be broken by the slightest shock, of a stamina so delicate as to be affected by the slightest impression. Disease in its steps at first is, as it were, soft and hesitating, weak in its powers and slow in its progress. But every instance of indulgence, and each succeeding advantage gained, confirms its steps, increases its powers and hastens its progress, and that which a moment ago seemed a thing too insignificant to mention,

now rises a monster that derides human effort, and whose sting is the arrow of death.

"Almost inappreciable are the beginnings of many fatal diseases; and should the grave reveal its secrets, I have not a doubt, when I consider the number of diseases produced by diseased teeth, that it would be found that thousands are there in whom the first fatal impulse was given by a diseased state of these organs, and could I raise my voice so as to be heard by every medical men in America, I would say to them: Attend to your patients' teeth, and if they are diseased, direct such remedies as shall restore them to health, and if in health, such means as shall keep them so."

Some Points in Ophthalmology

Which may be of Interest to Physicians Engaged in General Practice.

BY FRANKLIN D. CASTLE, M.D.

Read before the Pennsylvania State Medical Society.

I. How to determine whether a case of blindness is due to cataract or not, if the appearance of the pupil is such as to warrant a belief that the lens is opaque.

It has not unfrequently happened that patients have been sent to a specialist, with the diagnosis of cataract and the expectation that an operation for the removal of the lens would result in the restoration of vision, when, in reality, the opacity of the lens was only apparent or but slightly developed, and, even in the latter instance, entirely out of proportion to the deterioration of vision actually present. In contradistinction to these cases, there are others in which the opacity is so marked and striking that there can be no doubt as to the condition of the lens, but in which the cataract is only one symptom or manifestation of a morbid condition of the eyeball, and the real, essential cause of the blindness must be sought further back in the fundus of the eye. Leaving this latter class of cases out of consideration, let us turn our attention to those which belong in the category first mentioned.

It is evident that the mistake to which allusion has been made is, on the whole, a very natural one, and in a given case the practitioner may have to exercise an unusual amount of care and discrimination to avoid making it. In

an eye the vision of which is defective, the pupil has a grayish appearance. "Seeing is believing," and the case is pronounced to be one of cataract. In the vast majority of cases the correct diagnosis will have been made, but it will occasionally happen that the matter is not so simple as at first appears, and that the grayish appearance behind the pupil, which it seems so easy to correctly interpret, is found, on more exact examination, to depend on something entirely distinct from opacity of the lens. Carter has given a very good illustration of just such cases as these. He tells of an old lady with defective vision in both eyes, in whose case the diagnosis of cataract had been made by an eminent general practitioner residing in her neighborhood, some distance from the city of London; Carter was sent for to extract the opaque lenses, but fortunately he insisted upon having the old lady brought to his office in the city as a preliminary step, so that there might be no doubt about the diagnosis on the day of the operation.

The pupils in this case were of a "curiously milky aspect," but Carter was able, by the employment of a demonstrating ophthalmoscope, to satisfy the physician who had made the diagnosis of cataract that the lenses of the patient were as "clear as his own," and that the case was one of simple glaucoma, the whitish appearance of the pupils being, in all probability, due, in part, to the great development of the so-called glaucomatous ring around the optic discs. (This ring is an annular strip of choroid immediately encircling the optic nerve, which becomes atrophic in simple glaucoma, and thus allows the light rays passing into the interior of the eye to fall upon the subjacent sclerotic, from the broad, white surface of which they are reflected outwardly through the pupil.)

A case such as the foregoing is more or less embarrassing to all the physicians concerned in it, because the people at large know at least this much about a cataract, that perfect sight may be, and generally is, restored by an operation; and even if, in the case described, which was one of glaucoma, an operation may, in general, be indicated, yet, both the character and the result of the operative procedure would be entirely different if the patient's eyes had been the seat of cataract only. It is getting to be recognized more and more that iridectomy exerts a positively curative effect only in case of inflammatory glaucoma, in which there are undoubtedly inflammatory symptoms present in the anterior por-

tions of the globe, such as turbidity of the cornea, episcleral injection, and distended and tortuous veins traversing the sclerotic; and the more acute the character of the glaucomatous attack, the more brilliant, speaking in a general way, may be said to be the effect of the iridectomy. There is not the slightest danger, however, of confounding inflammatory glaucoma with cataract, and simple glaucoma (which can only be positively diagnosticated by means of the ophthalmoscope, and is characterized by the excavation of the intraocular end of the optic nerve, the glaucomatous ring, progressive deterioration of vision, and perhaps increased intraocular tension, and of which the case of Carter, mentioned above, is an example) is by no means surely benefited by an operation, whether it be sclerotomy or iridectomy. It rarely happens that vision is appreciably improved by either of these operations in cases of simple glaucoma. The utmost that is to be expected in such cases is preservation of the amount of vision still existing at the time of the operation. In fact, one European authority has had such positively bad results from the operation of iridectomy in cases of simple glaucoma that he has stated in print that nothing should ever induce him to perform this operation again in similar cases. At all events, this much is certain, that if a person is almost blind in consequence of simple glaucoma, it is not to be expected that an operation will restore sight, and it is not improbable that the disease will run its course to total blindness very much in the same way, whether an operation is performed or not. It is evident that, under these circumstances, the advisability of non-interference may come up for discussion in many cases, and a patient who had been told that he had cataract would be bitterly disappointed when he discovered the truth.

Now, it is certain that cases more or less analogous to this of Carter's, which we have taken as an illustration, have occurred in the practice of most ophthalmic surgeons of large experience, and the question arises as to whether the mistake of confounding cataract, not only in simple glaucoma, but also with other morbid conditions of the fundus which lead to permanent defects of vision, and in which the pupil may, perhaps, present a somewhat grayish appearance, can be avoided; I believe this is possible if strict attention be paid to the points which will presently be discussed, even if the physician is not in possession of an ophthalmoscope, or does not know how to use one. It is very easy to say that

every physician ought to be able to use this instrument skillfully and intelligently, but, in view of the facts that its intelligent employment has to be learned in special courses, that it requires more or less practice to maintain the skill that has been acquired in its use, and that a sufficient number of specialists are to be found in every large city or town who can be called on by the general practitioner in every case in which, in his judgment, an ophthalmoscopic examination is required, it seems probable that in the future, as in the past, the practical use of the ophthalmoscope will remain confined to the few who make a specialty of the diseases of the eye. Even the neurologists, in many cases, prefer to have any ophthalmoscopic examination which they may deem necessary made for them by an ophthalmic surgeon.

The first point which we would bring forward for the consideration of the general practitioner when he has to do with a case in which there is a suspicion of the presence of cataract, is this: The pupils of persons, as they grow older, are apt to lose the deep, jetty hue of early youth. This is probably due to the senile changes which take place in the lens, and, in certain cases, perhaps, to atrophic changes in the choroid, in consequence of which more light is reflected from the fundus of the eye.

The pupils of old people are, therefore, naturally somewhat grayish, and in certain cases this is so marked as to suggest the idea of the presence of a cataract, while illumination of the fundus with the ophthalmoscope shows that the lens is perfectly transparent, and all the details of the background of the eye are entirely distinct. If, in such a case, focal illumination be employed, *i. e.*, if a strong convex lens of two or three inches focus be held between the flame of a gas-burner in a darkened room and the eye which is under examination, in such a way that the apex of the cone of rays (which are condensed by the lens) falls on the pupil, so intense a grayish reflex will come from the latter that an uninitiated person might consider the diagnosis of cataract to be fully confirmed, although there is no lenticular opacity whatever. To such an extent is this the case when the eyes of old people are examined by this method, that it is to be considered as an axiom to lay no weight whatever upon the presence of a diffuse opacity in the pupil when focal illumination is employed. The presence of an opacity having a definite shape and contrasting strongly with its background, does show, indeed, the existence of changes in the lens, but

such appearances are entirely different from the diffuse, grayish reflex to which allusion has beenmade. This first point, therefore, that the eyes of old people may normally present, in ordinary daylight, a somewhat grayish shimmer, and that the conclusion must not be jumped at that cataract is present because this appearance may be noticeable and the patient complains of defective vision, must always be borne in mind.

In the second place, the blindness which results even from a ripe cataract is not absolute. Perception of light still remains. An eye which harbors a ripe cataract but is otherwise healthy, should perceive the light of a candle in a darkened room (the other eye, of course, being carefully covered) at a distance of twelve feet. Furthermore, the field of vision should be free; *i. e.*, if the physician seats himself opposite to the patient and directs the latter to look straight forward and to hold his eye in this position, the patient should be able to tell the direction from which the light comes, if the candle is moved about in front of his eye, first above, then below, then to either side Attention to these facts would prevent the perpetration of such a blunder as one which was brought to my notice some time ago. In this case, pronounced to be one of cataract, the pupil had a somewhat grayish appearance, and, in fact, there were a few opaque striæ in the lens, but the blindness was not referable to the condition of the lens at all. The perception of light in this eye was absolutely wanting, and the fundus could be clearly seen with the ophthalmoscope. The mischief causing the blindness was an affection of the optic nerve and retina. If the fundus of the eye had been healthy, the slight changes in the lens would have had but little effect upon the vision.

The third point which remains to be considered in this connection also necessitates the use of a candle in a darkened room, although it may be somewhat more convenient to employ, not necessarily the ophthalmoscopic mirror, but a reflector of some kind, such, for instance, as the mirror ordinarily used for laryngoscopic examination or inspection of the membrana tympani. With such a mirror and an ordinary gas flame, it is easy to see the images of the flame formed by the cornea and the anterior and posterior capsules of the lens. The doctor sits in front of the patient, the gas flame being to the side of and somewhat behind the head of the latter, and reflects the rays falling upon the mirror held in his hand into the eye of the patient. The image formed

by the cornea, which is very bright and comparatively large, is easily seen, while the image of the anterior capsule, which is faint and drowned, as it were, in the superior brightness of the corneal reflex, is not readily discerned. This is a matter of no importance, however, as the image which it is essential to see, the image formed by the posterior capsule, is always easily discovered, if only the lens has retained its transparency. It is very small, but sharp in its contours, although far less bright than the corneal reflex, is inverted, *i. e.*, the flame appears to point downward, and its identity, should there be any doubt left, is incontestably manifested by the fact that it moves in a direction opposite to that in which the corneal reflex does; thus, if by moving the mirror we cause the corneal reflex to move upward, the image of the posterior capsule will move downward, etc.

It is already evident that the condition, the visibility or invisibility of the image of the posterior capsule, is of great importance to any one who would make a diagnosis in a case of suspected cataract, but possesses no skill in the use of the ophthalmoscope. In a case of ripe cataract the image of the posterior capsule will not be found, as a matter of course. The opaque lens substance in front of the posterior capsule prevents the production of the image. In a case of partial cataract the image of the posterior capsule may be indistinctly visible in some parts of the pupillary area, but not in others. If the lens is diffusely but only slightly clouded (incipient cataract), the image of the posterior capsule may be indistinctly visible, as through a haze, but its edges will not be sharp and well defined, as under normal conditions, but more or less blurred and indistinct. In rare cases, in which a slight diffuse cloudiness of the lens is present, the image of the posterior capsule has been seen to be of a somewhat reddish tinge, a phenomenon which has been compared to the aspect of the rising sun when surrounded by a mist. In general, we may say that so long as we can produce the image of the posterior capsule by the use of a reflector, an extreme deterioration of vision can not be accounted for by the condition of the lens; if a state approaching blindness is present, there must be some additional cause for it.

The existence of these images was known, and their importance for the diagnosis of cataract recognized, before the introduction of the ophthalmoscope. Since the use of the latter instrument has become general in the diagnosis of cataract, as well as in other cases of eye disease, but little

attention has been given to this older method; and yet its employment may help us out of a difficulty when other instruments, even the ophthalmoscope, leave us in the lurch. To illustrate: In a well-known work on the eye, the statement is made that, in the case of a man aged about forty, it was impossible to illuminate the fundus with the ophthalmoscope, and the observer was in doubt whether he had to do with a so-called black cataract or an obstruction to the penetration of light situated behind the lens, as nothing positive could be discovered by the employment of focal illumination. Now, I can not see why this doubt should not have been very speedily settled. If no cataract was present in this case, the image of the posterior capsule must have been distinctly visible. Its presence would have shown that the lens was transparent, and that the obstruction must have been situated in the vitreous behind the lens. If, on the contrary, the image of the posterior capsule could not be produced, the inference that the lens was opaque would have been legitimate. I believe that the description in this case warrants me in drawing the conclusion that the obstruction to the penetration of light was situated behind the lens; because a so-called black cataract is never really black, but of a very dark, reddish hue, and if focal illumination be employed, it can generally be distinctly seen behind the pupil, in its true color.

The capsular images may also be employed, in a given case, to determine whether the lens is actually present in the eye. There are, of course, no capsular images in an eye from which the lens has been extracted. Mauthner mentions a case in which in one eye the lens was seen lying in the anterior chamber, and in the other the ophthalmoscope revealed hypermetropia of so high a degree as is rarely met with in eyes from which the lens has not been extracted. The suspicion, therefore, was excited that in this eye also the lens might not be in its place. The presence of the capsular images, however, showed that the lens in this eye was in its natural position.

I believe that by paying strict attention to these three points—by remembering, in the first instance, that every grayish appearance in the pupil, especially in old people, does not necessarily indicate the presence of a cataract, by testing the power of light perception, and then, if necessary, by determining whether the image of the posterior capsule can be made visible or not—every physician will be able to

decide whether a given case of "blindness or defective vision is due to cataract or not, if the appearance of the pupil is such as to warrant the belief that the lens is opaque;" and all the apparatus required for making this determination is a darkened room, a candle, a gas flame or a lamp, and a reflector; and even the last mentioned article can be dispensed with.

So much space has been devoted to the development of the first proposition forming the subject of this paper, that the other two points left for consideration must be treated briefly.

II. The probable diagnoses of cases of eye-strain; *i. e.*, cases in which the symptoms may be relieved by the adaptation of suitable glasses.

These cases are so common that every practicing physician occasionally sees one of them before the patient gets into the hands of the specialist. It is, therefore, desirable for him to have the salient features which they present in mind, so that he can at once add to his own reputation for knowledge and quiet the fears of the patient by telling him that he needs a glass, and must have his eyes examined by a competent person, as the glasses will relieve all the distressing symptoms. When we have to do with elderly persons, we must be somewhat careful about expressing an opinion, as there may be incipient cataract or other changes present, complicating the case.

If the patient is a child or young adult, however, we can generally diagnosticate "eye-strain" almost at the first glance, and tell them that their eyes need glasses, without the loss of valuable time. This happens every day at the various eye clinics, and there is no reason why every practitioner in the country should not recognize these cases with the same facility. The symptoms are as follows: The eyes generally have a normal appearance; occasionally there may be a slight redness of the margins of the lids, an appearance, however, which by no means explains the subjective symptoms. These are a feeling of weariness or weakness in the eyes, especially, and often only, when an attempt is made to use them, as in reading, writing, etc.; in some cases headaches, which come on, or are aggravated, when the eyes are used, and for which there is no other evident cause. In many cases the print becomes dim and blurred after the patient has read for a little while, and use of the eyes by artificial light is apt to aggravate all the symptoms, the un-

comfortable sensations in the eyes, the blurring and perhaps the headache. It is to be noticed that in ordinary cases of eye-strain, the print usually appears black and sharp at first, but becomes dim and blurred after a longer or shorter period of use, a phenomenon which depends on the relaxation of tension or giving away of the overburdened ciliary muscle in the majority of instances. It is only when the eye-strain depends upon a very high degree of hypermetropia or astigmatism that vision of near objects is more or less dim from the moment they are first looked at. Distant vision is good, often remarkably good, in most cases of eye-strain dependent on hypermetropia, and sufficiently so in astigmatism of a low degree. In hypermetropia, and especially in astigmatism of higher degree, distant vision may be somewhat indistinct. In inflammatory and atrophic affections of the optic nerve, retina, choroid and vitreous, on the other hand, the great complaint is of defective vision, which is often deteriorated to a very considerable extent. Also dark clouds or breaks may be noticed in the field of vision, but these affections are characteristically painless. Strain, feelings of discomfort, headache, on use of the eyes, are not what drives the patient to the doctor, but positive defects of vision. It is true that choked disc is found in eyes, the vision of which is perfect, but such discoveries are only made accidentally, for the most part, in connection with an examination for suspected brain disease. If the patient, recognizing that something is the matter with his eye, goes to a physician for the purpose of undergoing an ophthalmoscopic examination, and choked disc is found, defective vision is always present.

The rare cases in which eye-strain depends on overburdening of the recti interni muscles are, for the most part, found in connection with short sight or myopia. These cases are easily recognized, for the most part, as, in the majority of instances, the patient, if the short-sightedness is at all high in degree, knows himself that he is myopic, from the fact that he sees distant objects dimly and near objects perfectly well.

It should be mentioned that many cases of what was formerly somewhat vaguely called scrofulous ophthalmia, especially many cases of chronic marginal blepharitis and constantly occurring phlyctenular conjunctivitis, are dependent upon eye-strain, and are not permanently cured until the child or young adult is fitted with suitable glasses.

III. The necessity for the early recognition of acute glaucoma, and the avoidance of the use of atropia in every such case.

I only bring this point up, because I have known of cases in which acute glaucoma has not been recognized, and atropia, unfortunately, been used. It may be difficult, in a given case, for one who is not especially familiar with eye diseases to be entirely certain as to the form of intraocular inflammation with which he is confronted, and to distinguish, let us say, between glaucoma and certain forms of iritis, etc. Whenever such a state of doubt exists, the physician, if he feels called upon to prescribe at all before competent assistance can be obtained, should avoid the use of topical remedies, which may be potent for evil if misdirected, and confine himself to measures which he knows can scarcely do harm under any circumstances, such as the use of warm or cold compresses, as may be most agreeable to the patient, leeches to the temple if the eye is very red and the pain severe, the administration of morphia, etc. Carter, in his very popular and otherwise excellent work, already referred to, condemns the practice which many apothecaries in London (and elsewhere) have, of giving astringent solutions to persons with inflamed eyes, and states very properly that an attack of incipient iritis may be stimulated into a state of alarming intensity by the employment of a wash of this kind; he adds, however, that if such apothecaries give the patient anything at all, it should be a solution of atropia. In view of the fact that an attack of acute glaucoma has been repeatedly called into existence in an eye already predisposed to it, by the use of a solution of atropia, I can not consider this advice as sound. It has long been known that atropia may excite a glaucomatous attack, but cases have recently been reported showing that the other mydriatics, duboisia and homatropia, may act in the same way, being in so far confirmatory of Laquacur's proposition, that whatever produces dilatation of the pupil may cause glaucoma in an eye predisposed to it. It is evident that any agent which may excite an attack of glaucoma, must be carefully avoided in the treatment of the disease when it is actually present.

JEFFERSON MEDICAL COLLEGE now requires a three-years' course, or, rather, it will after 1890.

Selections.

Micro-Organisms and Disease.*

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NOTWITHSTANDING the great number of its daily converts and its able supporters, the so-called germ theory of disease is still viewed with more or less distrust by a great majority of the American medical fraternity, it seems. Indeed, some of our brethren go so far, I regret to say, as to attempt to ridicule the subject. Even in our own State, burlesques, more or less ingeniously conceived (in minds better fitted for comedy, it would seem, than for the noble pursuit of medicine), have found their way to the public. And yet, all the competent men the world over, who have searched and studied the subject experimentally, have come to an almost unanimous conclusion, and they form a colossal array of intellect in support of the much-abused and much-praised theory. For, in fact, bacteriology, in some quarters, is unmercifully abused, while in others it is as much too highly praised.

Some people do not believe, or affect not to believe, a word of it without giving any reason, while others see bacteria in everything. In Europe the people are doubtless comparatively more enlightened on this vexed question than they are on this continent, for they have had it in consideration longer; but, notwithstanding statements to the contrary, bacteriology has, comparatively speaking, advanced as rapidly here as in the Old World. In such a large country as ours, with nearly all medical schools giving but two terms of lectures, the new studies could, and can now, as a rule, be followed only after entering into practice. Besides that, it appears that some of the American medical school-teachers take particular pains to pooh-pooh at the very idea of pathogenic bacteria. Hence, we find many able physicians indifferent in regard to this very important science, some of whom will, in fact, without any reason of weight, dispute its claims from all standpoints. On the other hand, we find occasionally some

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well-informed men who are acquainted with the subject, but see it in a different light from that of the bacteriologist.

It becomes necessary, therefore, gentlemen of this association, to treat the matter somewhat in detail in certain points, and start from elementary problems. Not that I presume my audience to be totally ignorant of the natural history or any part of bateriology, but I have by experience come to the conclusion that it is important for a clear understanding of the case to discuss it thoroughly from the beginning. Besides, many of our number doubtless have given it but a passing thought.

HISTORICAL NOTES.

In 1722 Leuwenhoek observed microbes in putrid saliva and putrid water, and described them. During the period of more than a century and a half that has elapsed since then these microscopic beings have furnished to the naturalist, the zoölogist, the chemist, the physiologist, the botanist, the pathologist, etc., a constant cause for continual researches and controversies. Standing as they do at the extreme limit of appreciable vegetable and animal life—where the two seem to blend almost—they have been counted in the domain of both kingdoms. Indeed, for a long time it was doubted whether they possessed life. But both questions are now definitely solved. They can be cultivated in various ways in artificial media. They consequently are living, and the knowledge of their chemical composition and physiological nature furnishes satisfactory evidence of their character. They are vegetables, and are lower than the lowest fungi.

Before this point was reached, however, there were several attempts at classification. Thus, Müller, in 1773, established two species, the monos and the vibrio, and placed them, consequently, in the natural order of infusoria. Then, Bary de St. Vincent, in 1824; Ehrenberg, in 1838; Deyavdin, in 1841; all in their turn, also placed the bacteria in the order of infusoria. It was only in 1851, however, that a relationship between bacteria, vibrio and the leptothrix was claimed by Robin, of France. In 1859 Devanie, of the same country, declared that bacteria were vegetables. Since then a flood of light has been shed on their natural history by Hoffman, Pasteur, Cohn, Billroth, Sternberg, Lester, Klein, Koch, Zopf, Cornil, Bahes, Nocard, and many others less prominent. And now the terms microbe, bacteria, or schizo-

mycetes, signify everywhere little, living things, whether harmless or harmful—microscopic vegetables, probably all unicellular. The harmful or pathogenic micro-organisms have received a special name, however; they are referred to simply as "germs," because they are, as it were, the germs of certain diseases, and not because they are the seed of some other organisms.

In the natural history of bacteria, Cohn has without doubt rendered the greatest benefit to science, but practical services were rendered to the world only when Pasteur began the study of micro-organisms in relation to fermentation, between 1854 and 1857. At that time this greatest, perhaps, of the living chemists defeated completely the theory of fermentation as taught by Liebig and accepted everywhere in the universe, viz.: That fermentation was the alteration of nitrogenized substances, due to oxygen in the air. The molecular breaking up of nitrogenized matter by oyxgen, according to this old, revived theory, was the actual factor in fermentation. Pasteur proved, and the scientific world has since verified, that fermentation is not due to the air or its oxygen, but that it is due entirely to living micro-organisms—some bacteria, without which there can be no fermentation. He proved later that putrefaction is a form of fermentation, and that without the bacteria of putrefaction this phenomenon can not take place.

And thus, from step to step in these biological researches, he reluctantly left the field of physics and chemistry and plunged into the unknown, after these invisible beings. He studied anthrax of animals (causing malignant pustule of man), found it was due to a bacillus which could be grown outside the body and inoculated with fatal results long after, even with virus from one of successive cultivations, and finally, what is more astounding, he succeeded in weakening that bacillus so as to make it a vaccine against anthrax itself, which yearly destroyed millions of dollars worth of horses, cattle and sheep in France, not counting its deadly effects in the human family.

He afterward attacked the silk-worm disease, and found its cause in a species of bacteria. He suggested a remedy which was successful, and thus in one year, the statistics would show, "he saved more to his country than his government had to pay of indemnity after the Franco-Prussian war." He then studied the (French) swine plague and chicken cholera, with excellent results, and made researches

that shed more light on the nature and cause of septicemia and pyemia than all the students in medicine put together. It was at this point that Lister fell in line in a practical way and began his admirable antiseptic surgery, which has done so much good to the people in every civilized country. The celebrated Koch, of Germany, also followed in the steps of Pasteur, and soon made most important discoveries, facilitating the study and cultivation of bacteria. Not only this, but he discovered the bacillus of tuberculosis, and a bacillus supposed to be that of Asiatic cholera. And now, thanks to so many great men and arduous workers, we can grow bacteria almost at will, like we can grow wheat, and we can produce some diseases which they induce, and follow them step by step in their various phases. In fact, the cultivation of bacteria is farming on a minute scale. The growth of these small organisms is governed by the same general principles that govern the growth of other vegetables. To grow these infinitely small, the bacteriologist may take the seeds in animal bodies, or in the water, or even in food, and plant them in a prepared media—say gelatinized chicken or beef broth—and there grow them, like the farmer does wheat or oats sowed in land prepared to receive them. In both cases the field must be prepared to receive the plant or seed; and if fertilized, the growth will be healthier and more luxurious.

Bacteria of some kind exist almost everywhere. The air, the water, the soil, the food, and even the beautiful snow, may furnish millions of bacteria to the cubic inch. They may not all grow always in them very well under ordinary conditions, but whenever the soil is proper they develop. Like other living organisms, moisture is necessary to their healthy existence. Some live better in a warm climate than others, just as some larger plants do. A temperature much below freezing point, and at or above boiling, kills the most of them. And again, some require a certain kind of nourishment, and the others another, just as occurs with the various grains grown by the agriculturist. Therefore, we must conclude that bacteria, or their spores especially, may at least be kept alive outside of their fields of preference, outside of their favorite soils. On the same principle that oats may be kept a year in a brine and then sown with positive results, proving vegetation and life, so may the spores of at least some bacteria be kept a long time uncultivated, and even dried (not desiccated), and then be caused to grow in a suitable soil.

Now, what relations do bacteria found on or in the body bear to the animal organisms? They have the same relation to them that other vegetables bear to the soil in which we find them. In other words, animal bodies are the soils for the growth and proliferation of certain bacteria. Some grow in the various natural tracts of an individual without causing much or any injury; others grow there or in the substance of tissues, and cause thereby more or less destruction.

When a plant grows, it subtracts or extracts its nourishment from the soil in which it stands and works some transformation; when a bacteria grows, it does likewise, only the reproduction is much more, and in fact wonderfully, rapid. But, as we see, there is a vast difference in the soils of ordinary plants, harmless fungi and harmless bacteria, and the favorite soils of pathogenic bacteria. The former field is inert matter, the latter is living matter. The former is inert soil, indeed is generally earth, or may be dead substance, but the latter may be living substance—man or beast—who have a standard vitality of their own. Thus pathogenic bacteria are parasites; they live at the expense of the bodies of other living beings. Some of these bacteria find the tissues *in health* a proper soil for their growth and multiplication; others grow in them only after they have become weakened by ordinary affections, as a cold, a bruise, etc., or after the body has become fertilized soil by other causes (of common occurrence).

I have said that animal bodies have a standard vitality. This old theory, once abandoned, has been revived and proven true by more recent observations. Standard vitality may be shaken, and the system lose its equilibrium by various causes, thereby affording a better field for the germs, or the germs themselves may destroy that equilibrium primarily. The equilibrium thus destroyed, we have pathological phenomenon of a more or less serious nature. In specific diseases, due in all appearance exclusively to bacteria, the development and rapid proliferation of germs feeding on the organism and causing some transformation of tissues, besides generating some chemical substances, such as ptomaines, are the direct causes that affect the standard harmony of the organs. We then have various signs by which the disturbances are announced, and the whole of the phenomena is called disease. Diphtheria, scarlet fever, smallpox, measles, typhoid fever, malignant pustule of man or anthrax of ani-

mals, glanders in man and beast, tuberculosis in all individuals, septicemia of all animal bodies, yellow fever, Texas fever, and many others, are, so far as we can judge now, among the maladies due to specific bacteria, which seem to act whether or not the tissues have been by any cause weakened previously. But some of them, like septicemia and tuberculosis, come frequently as a sequel to such injuries as I have already stated, and which prepare the soil. There are bacteria, in fact, which apparently become pathogenic, especially under certain influences, which enrich the tissues in material fit for their food and weaken them at the same time. Such, probably, are the micrococcus of croupous pneumonia and the germs found in abscesses and pyemia.

Pathogenic bacteria have been classed with the ferments, and I believe justly so. They have identical powers and functions. If we consider the ferment that transforms sugar into alcohol, we will find it to be a micro-organism, of course. Now, alcohol is a narcotic stimulant that in certain doses may even produce death. Can we not compare to this ferment the bacillus of septicemia, for instance, which also produces a poisonous substance—the ptomaines—that may produce death? Consequently, we might properly say that all disease germs are some kind of ferment or other, and that the specific affections that they produce are the expressions of various forms of fermentation of some vital fluid or solid of the body.

Our bodies, outside and especially inside, are covered by or contain billions of bacteria. Some of them live at the expense of various products on the surface of the tegument or mucous membranes; others seem to give spores that stay dormant until a suitable nidus for their vegetation is found; still others continually destroy the epithelial cells, and live at their expense, it seems, to-wit, catarrh; others, again, like some bacteria of the teeth, are found around the gums, and even in the structure of the teeth, which, under various conditions, they seem to help to destruction. All of these microbes may become injurious in certain conditions, as we will see further. The totally healthy and undisturbed tissues of the organisms are capable of resisting them.

The bacillus septicus, for instance, may be found, I should judge, anywhere in or out of the body. Yet septicemia is not common in any condition; comparatively speaking, it is not very common, even after wounds. But it is very well known, nevertheless, that ninety per cent. of the cases

come after the occurrence of wounds that we have knowledge of

Whether the bacteria develop first in the wound itself, and then proceed deeper by means of the circulation, or whether the wound simply prepares a means of ingress for them, is not a clear proposition. But at any rate, we know that in such poisoning the bacteria of septicemia must have been about, and we know, on the other hand, that by inoculation (with a fine hypodermic syringe), even without a previous wound, we can produce septicemia. Hence, here is a bacteria that lives with us, is deadly with or without previous or extensive simultaneous injuries, providing it gets access into the elements of the tissues or organs, and yet until that occurs our organisms resist them. Why is it? Why does this occur with several bacteria reputed injurious that we constantly harbor? It is because our own body elements resist the attacks of the microbes and prevent their ingress, or constantly destroy them as they generate. The cells of the body, which gradually and constantly reproduce themselves and continually replace the waste material, thus maintain the standard equilibrium of the organism. The animal body is, after all, practically but an agglomeration of cells which have individual life. Each cell, therefore, struggles for its own existence, and all the cells together, by their constant reproductions, maintain the existence of the whole individual. The natural functions of life thus imposed upon them implies that they must choose food for themselves individually and collectively and neglect that which is deleterious to their health. Therefore we naturally come to the conclusion that with at least certain kinds of bacteria the animal cells carry on a constant "fight for existence," while others more deadly destroy the cellular element at an early date, in spite of their resistance.

As to the manner in which various bacteria cause lesions, there are several hypotheses. It appears to me that they act both mechanically and chemically, *i. e.*, they injure tissues by their presence and great quantity, and by the chemical agents that they produce.

But I have said enough, gentlemen, on this question of great moment. If I have succeeded in kindling in your hearts a desire for investigation and discussion, I will be well repaid for my labors, for I feel convinced that this humble effort may be beneficial in the end.—*Kansas City Medical Record.*

Radical Cure of Hernia.

A. W. RIDENOUR, M.D., MASSILLON, O.

A paper read before the Ohio State Medical Society, June, 1888.

RUPTURES are numerous—about one in five persons is so afflicted. Hereditary influence is a strong predisposing cause. Occupation is another. Among the exciting causes may be mentioned heavy lifting, straining, coughing and sudden change of position from horizontal to upright. For our purpose we will recognize oblique inguinal, femoral, direct and umbilical, the two first being the most frequently met with.

In recent cases of the first named variety we will find an internal ring, a canal and an external ring, besides the proper coverings. In old cases of the same we will find but one opening with the pillars for boundaries (the oblique and transversalis muscles), the canal and internal ring being crowded down to the pillars.

In the direct variety the pillars form the opening bounding proper, first and last. In treating old cases, therefore, of either variety, we will recognize the pillars as the key to our proper success, and it is as well to bear this in mind.

The diagnosis of either is easy. In femoral hernia we find Gimbernat's ligament enters into the formation of the external opening, but from the very nature, inelasticity, with little adhesiveness of the structures entering into the formation of the opening, great care is needed in our attempts at closure.

Umbilical hernia has an opening readily recognized and readily closed. The prognosis in all hernias is always unfavorable without treatment, nature does not cure a protrusion, but unaided by art she soon abandons the fight and the case goes from bad to worse. But happily art steps in and renders the prognosis favorable.

From early times to the present various modes of treating rupture by outside pressure and cutting have been adopted; more recently injections of various substances into the canal and openings have been tried. All the methods have had their advocates, and it would be unjust to add without cures. Many cases of rupture in children, for instance, have been cured by the early application of a well-fitting truss, and we have authority of the late Dr. Wood, of New York, in favor

of his method of invagination of canal and skin by sutures, he having been successful in some few instances. Dr. Heaton claims to have cured over three thousand cases by injection of Quercus alba into the canal. However, others have been unsuccessful with this method and it has fallen into disrepute, and when we study carefully the anatomical structure and changes that take place in old cases, especially where the canal is obliterated, and the kind of tissue lining the canal—in recent cases—where the adhesive inflammatory process takes place—the necessarily weak and uncertain adhesions—where a peritoneal boundary is universal, we are forced to the conclusion that Dr. Wood's and Dr. Heaton's methods will not permanently prevent a rupture from returning. We do know that adhesion between muscular fibre is firmer than between membraneous structure, and when to that is added granulation tissue, cicatrix, and the closure of opening with removal of sac, we certainly feel justified in emphasizing the statement that only recently have surgeons begun to search in the proper manner for the solution of this problem.

That the radical treatment of hernia to-day involves the cutting process, need deter no surgeon from attempting it who is a practiced operator; neither need it deter the patient from placing his case in the hands of that operator, for the reason that antiseptic surgery has rendered safe what formerly was considered a dangerous operation.

The old statistics placed the mortality in strangulated hernia operations at sixty-eight per cent. (Connor). I will say now, without fear of successful contradiction, that this excessive mortality is reduced by good, practiced surgeons, who use strict antiseptics, to not more than one per cent. I take it that every surgeon who makes these operations instructs his neighboring physicians to have operations for strangulated hernia made early before sphacelation sets in. The mortality after operations for radical cure where strangulation does not exist is less than one per cent.

The surgeons who have been engaged in making the radical cure operation by the cutting method, have been paying the most attention to the treatment of the sac. I will endeavor to impress upon your minds this fact, that while it is proper to devote all the attention to the sac that has been paid to it, yet I consider the attention to the proper closure of the opening into the abdominal cavity the key of the success, as I stated before. In general, then—

1. The sac may be reduced within the abdominal cavity.
2. It may be left in the canal when firm adhesions prevent its safe return.
3. It may be ligatured, the hernial investment amputated and stump returned.
4. It may be ligatured, amputated and then invaginated in the canal.
5. It may be drawn up upon itself, fixed as a bulwark against the internal ring.
6. It may twisted upon itself and left in the canal.
7. It may be interwoven into the fibrous structure of the pillars.

Riesel ties the sac as high up as possible, leaving the sac below point of ligature to help fill the distended canal.

Nusbaum, Sewel and Czerny tie the sac high up, but remove the sac below the point of ligature.

Mitchell Banks was one of the first to favor this latter method. Ball favors twisting the sac and leaving it in the canal. Bryant interweaves it in the pillars. MacEwen fixes it within the internal ring. My own practice has been to deal with the sac as circumstances require. I may mention, however, that in females my practice is to always pull down the sac beyond point where it is organized—after separating adhesions, if present, ligate, cut off and remove all below; return stump into cavity of abdomen, after assuring myself that all bleeding has ceased.

In the male, in recent cases, where the hernia is not scrotal, the same rule obtains. In scrotal hernia, with adhesions to tunica vaginalis and epididymis, I either leave that portion of sac intact or remove testicle; this in old cases and in old people exclusively, with their previous consent; otherwise leave that portion of sac; cut, dissect loose about one or two inches beyond opening, tie, cut off and return. The sac being an important factor, therefore it is necessary to understand that while, in very recent cases, there is not much change in its structure from peritoneum proper, yet sooner or later it becomes an organized body separated from parent peritoneum, thicker, with more numerous vessels; the point at which organization begins is at the internal ring. Adhesions soon form which, in old cases, are sometimes difficult to separate when the form is scrotal and to epididymis, but not difficult to separate from connective tissue in the female or tunica vaginalis in the male. Occasionally you will meet with cases where a portion of omentum is adherent

to sac. In all such cases it is better to ligate the omentum with the sac, tying all vessels after removal of stump. Otherwise, when you separate the omental adhesions you will have bleeding within the cavity, which will endanger the life of your patient. When adhesions form to the spermatic vessels, considerable care is necessary in separating them, especially the cord and its accompanying artery and vein.

As above stated, it is, in my opinion, necessary to success that all sac, all connective tissue and even all the tunica vaginalis, save the floor where the cord and vessels lie, should be removed at the point where we wish to close the opening, bring bare muscle together and this only after freshening up by scraping, incising and otherwise mutilating so that union will be firm. I hope I am rightly understood, as this is the key to the success. You want to efface as much as possible all semblance of an opening or canal; allow nothing that will form a focus for the concentrated energies of the bowels to begin work upon.

Dr. Banks, of Liverpool, was the first to advocate silver wire in closing the opening, but I believe he only used one suture of wire. Others use silk, cat-gut, silk worm, and one or two advocate open wound treatment without any closure at all.

In recent cases where I find the internal ring, canal and external ring, I pull down the internal ring and with curved scissors remove all but the floor in the male and all in the female. Remove the boundaries of canal in same manner, and all but the muscular pillars of the external opening. If femoral, freshen Gimbernat's ligament as best I can, although do not rely much on its adhesive power, but will state right here that I endeavor to close the femoral opening permanently by passing silver wire deeply, including pillars, Poupart's and Gimbernat's ligaments. Silver wire then is what I rely on to close the opening. Objection has been made by one eminent authority that the suture either cuts through or does not hold after the first few days. A little cutting takes place at first in a few cases, but as soon as the muscular fibres have united, all irritation ceases and the wires remain to act as a bulwark against any sudden attempt at rupture by violence in future. This I know to be a fact from personal experience repeatedly. I pass one silver wire entirely around internal ring in the female, avoiding the floor of same in the male. Pass another around canal half inch from first with same precautions, another half inch

from second, and so on to external opening; here, instead of using one, I sometimes use two or even three of the pillars, one widely separated and short, from above, downward instead of from behind forward as in the canal. All the sutures I pass deeply, entirely surrounding the pillars. In some instances I use four, in others five or even six silver sutures. My usual method has been to cut off the twisted end and double it on itself—point in itself—so as to prevent irritation from sharp points, and closing wounds over the wires, first by deep silk-worm gut, but including skin—for facility in removing—placed at three-fourths inches apart, finally closing skin with continuous cat-gut suture.

One prominent surgeon of New York, Dr. McBurney, attaches the integument of each side to the pillars of the ring—or adjoining—allowing the bottom of the wound to granulate.

Now, after the bowel once makes an inroad on the pillars and they begin to separate, no amount of granulation tissue or cicatrix outside will prevent the bowel from showing up, while it may not go through the tissue it will go around it—like a celebrated general of the late war—and the bowel is just as stubborn to manage after it takes the field. Or, if you like, notice the breaking of a mill-dam, first a weak spot, a drop or two more, finally one grand giving way of the whole. You might fill up the real course with solid gold below, but the water would take to the fields and woods. I might add that all preparation of patient, the operation and subsequent dressing, is strictly antiseptic.

The last operation I modified the treatment of the wire by using perforated shot instead of bending the ends of the twisted wire, pressed the shot down and closed perforation with strong forceps.

I do not use tight dressings at any time after, neither do I allow my patients to wear any "belly band" afterward, not even corsets, which last press the bowels down, and place a vis-a-tergo force in motion continuously. Of course, you will have the ladies object to this, but your aim is to cure your patient.

I have made thirty-eight cutting operations for hernia in in all, twenty-five for pure radical cure and five for radical cure with strangulated hernia, and eight old-fashioned operations for simple strangulation before I began the radical cure method. My first operation for strangulated hernia dates back to 1869. My first operation for radical cure was

made in June, 1883, and the patient a young, robust man, who wears no truss to this day and works hard.

I have had no deaths as yet, either in my strangulated hernia operations or for radical cure. I opened the sac in every case of my early operations for strangulation, and to that I attribute my success, as in several cases I found adherent omentum to wall of sac, with bowel bound down between the mass (intussusception of omentum and bowels), which would have resulted in death had I not opened the sac and discovered it; one of those cases, you know, where "the operation was a glorious success, a brilliant operation, but the patient died afterward from some internal complication."

Four cases do not wear a truss—no protrusion, three years after operation. One case of rupture returned; after six months, did not use silver wire. Did not complete the operation, as I do now. The majority of my cases are not over one or two years old, that is since operation, and ten are within the past year; six are double operations. I find it just as easy for the patient to operate on both sides as one. Six were ladies; one a little boy six years old. One failure before using silver wire, none since, but then it is proper to add that some of the cases were operated on quite recently, for instance, four since January, 1888. But very little pain or fever follows the operation, and in the majority of cases I get primary union in five to seven days. I find these cases do as well ultimately as the others when the wound opens slightly.

One old gentleman, sixty-seven, operated on in April, was only able to remove upper part of sac, scrotal hernia, varicocele, hydrocele, enormous hypertrophy of all parts with great opening—2 by 2½ inches. Left lower part sac, removed three spermatic veins by ligature at two different points, two inches apart, cutting out intervening portion to cure the varicocele; removal of part of tunica vaginalis to cure the hydrocele; applied fine silver wire to pillars, shotted same, closed and dressed wound as usual. Patient is doing well; will preserve testicle and probably cure rupture; operated on other side at same time for single rupture. This patient was still all right on June 10, 1888.

In an operation for strangulated umbilical hernia last summer, bowel and omentum were present; tumor size of fetal head, adherent all around; dissected loose all omental adhesion; ligated and cut off same; replaced bowel, ligated

and cut off sac, putting back into cavity after assuring myself that all bleeding points were tied, freshened up opening with scissors, closed same with silver wire, and patient recovered without fever or pain, and no return of rupture.

I say, therefore, that we should encourage operations in young or old, male or female.—*Columbus Med. Jour.*

Successful Treatment of Syphilis.

BY GEORGE HOWE, M.D., OF NEW ORLEANS.

THE results of another year's use of succus alterans finds me, if possible, a more enthusiastic advocate of its use in all stages of syphilis.

Among those cases which have come under my care are two which may be of more than usual interest.

Mr. B. C—— came to New Orleans in December, 1886, to attend to some business which kept him here about three months. He had been suffering from syphilis for nearly six years, and had been under the care of eminent practitioners in his native State for a long period. Changing his residence to another State, he was again under medical care. He had been repeatedly mercurialized, iodized, and in fact had gone through a regimen of treatment and diet which was heroic in the extreme. Among other remedies iodide of potassium had been administered until he was taking the enormous amount of seven hundred grains daily. He is of more than ordinary intelligence, and had kept a record of the doses and their gradual increase until the amount, a little exceeding seven hundred grains daily, was taken for some time.

When he came to me his condition was such as would have enlisted the sympathy of any one. About five feet eight inches in height, and weighing one hundred and fifteen pounds—a countenance expressive of suffering, and the utmost resignation to a life of continued torture—impaired digestion by day and osteoscopic agony at night—in fact, the most unpromising case I had ever seen.

With some difficulty he was persuaded to use succus alterans in a methodical manner, and at once began to take it in ℥ii doses three times daily. A few days after he returned and desired some relief from the pains, nocturnal

and diurnal, caused by nodes in formation and those already fully developed.

He was advised to use a four (4) per cent. solution of cocaine hydrochlorate, painted over each seat of pain, and half an hour after its application to paint the same surface with tinct. iodine. Immediate relief followed, and it was not necessary to use it more than once during the night, except upon one occasion. This treatment gave such relief as to permit its being discontinued after about ten days. He was also advised to use fifteen grains potas. iodide during the day, taking five grains with each dose of succus. This was followed for one month, then the potas. iodide was dropped and the treatment confined to succus alone. At the end of the second month he began the maximum ʒss dose (February, 1887) and kept it up to September, 1887, then at my suggestion reduced the dose to ʒi three times daily.

About November 20, 1887, he returned to New Orleans and called on me. I did not recognize him in his improved appearance. Has never suffered from the asteocopic pains since, nearly eleven months, has increased in weight, and his complexion and general appearance indicate a return to health. He will continue succus alterans for six months longer in ʒss doses twice daily for two months, then very gradually reduce to ʒi twice daily. This case alone has been so complete a success that I do not hesitate to advise succus alterans in all stages of syphilis.

Mr. G——, an Israelite of this city, came under my care in December, 1886, then in the secondary stage, with characteristic eruption, sore throat and alopecia. Had been thoroughly salivated, and, thus disgusted with that course of treatment, was at once ordered succus alterans in ʒi doses three times daily for two weeks, then increased to ʒii doses for another two weeks, then ʒiii doses for one month, then ʒss doses three times daily, which was continued for about four months, and with such complete success that I reduced the dose one half. While taking this reduced dose he again contracted syphilis—two chancres, followed by fever eruption, sore throat and loss of hair, thus demonstrating his complete cure so far as first poisoning was concerned, as it is now an accepted fact that no one suffering from syphilis can be reinoculated with the same poison. Again the treatment was resumed and the course fully carried out with a complete cure in about six months.

I notice the difficulty attending the treatment of the Israelite suffering from syphilis. A number of cases have come under my care, and I find them to be particularly obstinate and much less likely to be relieved in a specified time than the Christian. Is this the result of intermarriage, with a highly developed hereditary taint, or the result of their mode of living? I would like to have the views and experience of other physicians of this.

Other cases, possessing no distinctive features, have been treated with unusual success, and in no case have I found recourse to mercury necessary or advisable to hasten cure.—*Atlanta Med. and Surg. Jour.*

Acne.

ACNE, or acne vulgaris, as it is sometimes called, is one of the most common of the diseases of the skin. It constitutes quite a respectable percentage of the grand total, but relief is not sought as often as its frequency would seem to indicate. It consists essentially in an inflammatory condition of the sebaceous glands, and manifests itself in the form of papules, pustules and tubercles distributed for the most part about the face, neck, back and shoulders. The most common forms are the papular and pustular, so named from the predominance of the lesions existing at the time. The forehead is perhaps the portion of the face most frequently attacked, other portions being also implicated, however, quite frequently. There are no subjective symptoms connected with this disease, unless it be a slight pain upon pressure when the disease is in its acute form. The trouble, generally, begins as a papule, varying in size from a pinhead to a split pea, and this may remain as such or become a pustule through the inflammatory action which is present. Should it remain a papule, it undergoes more or less resolution, or may enlarge and become a little more indurated, and infiltrate a portion of the underlying tissues and thus becomes a tubercle. When a pustule forms it develops to its acme, the pus is discharged, a small crust forms, and it heals spontaneously. Successive crops are continually making their appearance, so that it may happen that the patient is never entirely free of the disease for years.

Acne occurs in both sexes about equally, and, as a rule, first makes its appearance at puberty. At this time the

whole cutaneous system undergoes a greater or less disturbance, the hair in various portions of the body begins to grow, and the sebaceous glands are prepared for a greater functional activity than they have hitherto possessed.

The causes of acne are varied and numerous. Among those which hold a first place, however, may be mentioned disturbances of the gastro-intestinal tract. Constipation especially is a very fruitful cause of this disease, as also dyspepsia and allied disorders. These are conditions very often found more especially in young women.

Besides this we have uterine disorders, such as dysmenorrhœa, amenorrhœa and genito-urinary disturbances. Renal troubles act as exciting causes of acne, at times. There seems also to be a certain tendency to the disease, in certain families, so that it would almost seem as if some hereditability were attached to it. In addition to the internal causes, a few of the principal ones having only been mentioned, we have external agencies producing the so-called *acne artificialis*. Tar and similar agents are the active agents in its production, whilst the internal use of certain remedies, notably iodide of potassium, produces an artificial acne generally classified under the medicinal eruptions.

The diagnosis of acne is not very difficult. It must be distinguished from eczema, syphilis and smallpox. From the first mentioned disease it is easily distinguished by the absence of itching, and from the fact that eczema of the face is rarely papular or pustular in character. The history, moreover, would serve to distinguish the two very easily. The papular and pustular syphilodermata must be examined a little more closely, especially the acne-form syphiloderm which sometimes occurs upon the forehead as the *corona Veneris*. The history, the presence of other lesions, the tendency of syphilitic lesions to group and the length of time the lesions exists, if carefully considered, will make the diagnosis clear. As to variola, the history would be sufficient. The chronic nature of acne, the comparatively short period of time between successive crops, the locality attacked, the age of the patient, the inflammatory nature of the lesions, the absence of subjective symptoms, and the anatomical seat of the disease (the sebaceous glands) should never be forgotten.

It is an uncommon thing to see acne in a child before puberty or in a person beyond the forty-fifth year.

The treatment of this disease should be constitutional and

local. The general measures employed should be such as will tend to bring the patient to as normal a condition as is possible by therapeutic means. The condition which is most common and most constantly demands attention is the constipation which exists. To overcome this, the diet, in the first place, should be so regulated as to insure the greatest amount of nutrition with the least amount of labor on the part of the stomach, and arranged so as to preclude the condition of constipation or a tendency thereto. To make the bowels more regular, fluid extract of cascara sagrada, or the aperient mineral waters, are useful. An occasional dose of calomel will be of benefit. The following aperient mixture given by Duhring gives excellent results:

℞. Magnesiæ sulphatis, . . . ℥jss.
Ferri sulphatis, . . . gr. xvj.
Acidi sulphurici dil., . . . ℥ij.
Aquæ, ... ℥viij.
M.
Sig. Tablespoonful in a tumbler of water.

This should be taken about twenty minutes before breakfast, or, if necessary, before supper also.

Besides the general remedies indicated in the case, we have some which do good occasionally. Sulphide of calcium, in quarter-grain doses four times a day, is sometimes indicated in suppurative form. Arsenic is useful in the indurated forms or where the papules are imperfectly developed, and may be given in two or three drop doses of Fowler's solution in wine of iron, or in one drop doses of a one per cent. alcoholic solution of bromide of arsenic, thrice daily after meals.

The local treatment is to be either soothing or stimulating, according to the indications which are present. In the greater number of cases the latter plan must be adopted. Soothing applications and lotions and bland ointments should be employed where there is a high grade of inflammation. The methods of stimulating are numerous. Sapo viridis pure or diluted may be applied at night, following this with a bland ointment. The pustules should be opened and their contents squeezed out. Hot water cloths applied at night, and followed in the morning with cold douches and frictions are valuable. Sulphur is a very good remedy to apply, and may be prescribed in ointments or lotions, in strength varying from twenty grains to two drachms to the ounce.

The following lotion recommended by Bulkley is good:

℞. Sulphuris loti, ... ℥j.
Ætheris, ... ℥vj.
Alcoholis, ... ℥iijss.
M.
Sig. Apply as a lotion.

Sulphuret of potassium may be used, as also Vleminckx's lotion. Where more active stimulation is required biniodide of mercury or corrosive sublimate or protoiodide of mercury or ammoniated mercury can be used.

The surgical treatment is often of greater value, more especially in the indurated and tubercular forms, and care should be taken to cut well into these lesions, passing through the center, and applying warm cloths so as to induce free hemorrhage. In conjunction with this, the sulphur and mercury ointment mentioned in the "Talk" on Comedo will prove serviceable.

One point which should not be forgotten is to examine male patients for urethral stricture. If such exists bougies should be introduced, or other means employed to enlarge the calibre of the urethra at the part of constriction. In a number of cases the beneficial effects of this treatment will be observed in an amelioration of the skin trouble.

The prognosis of acne depends, in a great degree, upon the cause producing it. It has a tendency to be chronic, and is generally stubborn to all treatment to a greater or less degree. There is a tendency to spontaneous recovery at about the twenty-sixth year, but if the cause of the disease be corrected and appropriate local treatment instituted, success will be pretty fair.

The Philadelphia Clinics.

MEDICO-CHIRURGICAL HOSPITAL.

Carbuncle. — In the treatment of carbuncle, Stubbs thinks the more rational way is to evacuate any pus contents as evidenced by fluctuation, by a thorough crucial incision, and then to swab the inside of the carbuncle vigorously with tincture of iodine, full strength, afterward poulticing with flaxseed and using the carbolized wash. While granting that the method of using the two per cent. carbolic acid spray, as advised by Brouillard, of Paris, may be very use-

ful in mitigating the pain or even in aborting an oncoming carbuncle, it does not seem to him wise to allow any poisonous matter to remain. In his experience, quick and excellent cures result.

ORCHITIS.—Stubbs' plan of treatment is threefold, namely: first, a cooling regimen and rest in bed; second, the enlarged testicle to be painted twice a day with full strength of tincture of iodine, and then to be covered entirely with, first, a thick wool or canton flannel compress wrung out in hot water; second, with a dry woolen compress and then with oiled silk, the testicle in the meanwhile to be properly supported.

This treatment can be modified according to the nature of the cause of the trouble, but has been often proved efficient and pleasant by Dr. Stubbs.

UNIVERSITY HOSPITAL.

A DOUBTFUL CASE.—An interesting incident occurred at the University the other day; doubly interesting because it showed that even to the most celebrated and skilled diagnostician a case may be utterly perplexing.

A country physician brought to Dr. Goodell a woman to be operated on for an abdominal tumor. Examination caused so much pain that a careful one could not be made prior to the administration of ether. When this had been done preparatory to operating, Goodell made a thorough examination, and the more he examined, the more he was inclined to the belief that he had to deal with a pregnancy of some sort, probably extra-uterine. This, in spite of the fact that the woman had given birth to her last child thirteen years ago, and had strenously denied that she had been exposed to the possibility of becoming pregnant.

Being unable to reach a conclusion, he made an exploratory incision along the linea alba, for diagnostic purposes.

The possibilities were then found to lie between these three: tumor, uterus bicornis with one horn pregnant and extra-uterine pregnancy, the likelihood lying between the latter two. Without such manipulation as would risk producing abortion, if a fœtus were present, Goodell could not arrive at a certainty. So he decided to close the incision and wait for developments, saying that if it were a tubal pregnancy and had gone so long without bursting—three months—it would doubtless be safe to wait some time

longer; meanwhile keeping the patient in the hospital under observation.

Resection of Knee-Joint.—(Agnew.) Here is a young man who has suffered from pain and annoyance in the right knee-joint. Two years ago he was struck on the knee, and since that time the pain has grown much worse, the swelling has greatly increased; and he has altogether so much trouble that he asks me to amputate his leg above the knee. I have not promised to do this; nor shall I do it, if I can save the leg by resecting the joint. Of the different ways of exposing the joint, I prefer to turn up a lid-like flap from below, as in amputation. We now saw off the opposing ends of the femur and the tibia, remove the patella and all the diseased tissues, and finally fasten the bones together with wire sutures. Drainage tubes are placed in the most dependent portions of the wound, the soft parts are brought together, and we hope to have good union and a serviceable limb.

PHILADELPHIA HOSPITAL.

Ununited Fracture of the Femur.—(Deaver.) The commonest cause of an ununited fracture is meddlesome surgery, especially too frequent dressing; and also a failure on the part of the surgeon to overcome thoroughly the contraction of the quadriceps extensor femoris.

The plaster-of-Paris bandage for a fracture should immobilize not only the fracture part, but also the joint immediately above and the joint below.

The case operated on was that of a woman who had met with a tranverse fracture of the patella, the result of a fall on the ice last December.

As the opening of the largest joint in the body is fraught with much danger, both to the joint and to the patient, the greatest antiseptic precautions were taken. The evening before the operation, the limb was washed with soap and water, with turpentine, with alcohol, with ether, and finally, was enveloped in towels saturated with bichloride (1:2000), and left in them till the time of the operation. Before beginning the operation, Dr. Deaver washed his hands in soap and water, in alcohol and in bichloride (1:2000).

A vertical incision, about three inches long, was made in the median line, and the skin dissected to either side, exposing the two fragments of the petella. The cicatricial tissue which had formed between the fragments, was entirely

removed, and the free surface was freshened with saw and forceps, till the cancellous structure was exposed. Holes were now drilled in each fragment, beginning at the upper surface and drilling obliquely to the junction of the cancellous tissue with the cartilage below. Silver-wire sutures, about a line in diameter, were passed through, the fragments drawn tightly together, and after making a twist or two, the ends of the wire were hammered down close to the bones, as Dr. Deaver believes this to be the best method of disposing of them.

The wound was now closed with wire sutures, dressed antiseptically, and placed in an Ashhurst knee-excision splint; and this again in a fracture-box.

May 12th. The patient is doing well.

How to Open a Felon, and How to Abort It.

W. D. HUTCHINGS, M.D.

In order to avoid the mortifying results—necrosis, loss or deformity of finger—following deep-seated paronychia, the surgeon must abandon a temporizing policy, and, at the proper time, make boldly a free incision to the pus formation. No half-way measures will answer in this case; the incision must be carried down to the point indicated, and be made sufficiently free to avoid occlusion and retention of pus, by the subsequent swelling of the parts.

The *time* to incise is an all important point in obtaining a successful issue, and is left indefinite by our best authorities. This trouble is not even noticed in the hand-books of surgery by Smith or Stimson. Surely neither of these writers ever suffered with this exceedingly painful affection, else pages would have been devoted to its consideration. Is the loss of a finger, the dreadful suffering, the deformity of a hand, of such little moment that the reputation of the surgeon can not suffer thereby?

The venerated Dr. Gross, in an admirable article in his "System of Surgery," recommends an early operation, but does not designate the day or mention the *initial symptom* of the disease—a symptom which is the indicator of the day when the lancet should be used. The sensation of a splinter, briar or foreign body being in the part where the disease is

locating, is the *initial symptom*, and the subject has almost invariably endeavored to pick it before applying for advice.

The *time* for the free use of the lancet is the fifth or sixth day following the initial symptom. I never, if opportunity affords, defer its use beyond the seventh day. Almost all cases who have applied to me after the eighth day had passed have made a tedious recovery—many with the loss of a phalanx or an entire finger, the bone having been destroyed before the remedy was brought to bear.

The above remarks, of course, apply to whitlow when deep-seated. The superficial variety is an easily-managed and a comparatively trivial affair. As we do not meet with whitlow in subjects free from systemic derangement, I always resort to appropriate treatment. I address the liver, administer quinine or other remedies, until the evil is overcome.

I will now consider the plan to abort. When consulted during the initial symptom, I seldom fail to abort by *inducing absorption* from continued pressure of the part. I force absorption by wrapping or binding the finger with a cord or very narrow tape—but prefer a cord of one-eighth of an inch in diameter—commencing at the extreme distal end of the finger, and carrying it up to the proximal joint above the local error, and let it remain until pain and throbbing become unendurable, then quickly release the finger, and after resting it a few minutes, again rebind still more firmly in the same manner, thus binding and rebinding for half to three-quarters of an hour, until the finger is reduced to two-thirds its normal size.

By this procedure I have never failed, when the subject is presented in time, to abort paronychia, or to convert it into a superficial abscess. If the patient neglects the initial stage, and a particle of pus is formed, the lancet is the only resort.

Thirty-nine years ago, the writer, then a distinguished medical student, came near being extinguished by a felonious felon; and then and there determined never again to suffer torments worse than those of Ixion's wheel, and by this method he has preserved, not only himself and others, but members of his own family, time and again, from those infernal tortures.—*Indiana Medical Journal.*

Microscopy.

Dr. Sternberg on the Bacteriology of Yellow Fever.

Dr. Sternberg, who was commissioned by the American Government to proceed to Cuba and there to investigate and report upon yellow fever, especially from a bacteriological point of view, recently gave an important lecture to the members of the Royal Academy of Sciences in Havana before returning home at the conclusion of his labors. From the abstract which we append, it will be observed that there are considerable discrepancies between the results arrived at by Dr. Sternberg and those obtained by the commissioner of the French Government, Dr. Gibier. The whole subject appears to be fraught with considerable difficulty, and evidently requires a good deal more investigation for its proper elucidation.

In all the ten necropsies made by Dr. Sternberg he reserved for examination parts of the stomach and intestines, of the interior of the liver and kidneys, and also specimens of urine from the bladder and of blood from the heart. With these materials he reared cultures in meat-peptone jelly or agar-agar, and in some cases in solidified serum or in peptonized broth.

Blood.—In eight out of ten cases the cultures from blood taken from the heart remained sterile. In one case some colonies of a bacillus, from one and a half to three times as long as its breadth, with rounded ends, and occurring singly or in pairs, were obtained. This bacillus Dr. Sternberg denominates bacillus *a*. In its morphological aspects it appears to bear considerable resemblance to some common bacilli of putrefaction, but it differs from these in the appearance of its colonies in jelly. The deep colonies are lobulated and have a pale-brown color, and those which grow near the surface present a lobulated margin, which gives them the aspect of a rosette or of a flower with its petals open, like a daisy.

Urine.—Seven of the cultures were sterile; in the other three there were micro-organisms; in one the bacillus *a* was found associated with at least two other bacilli; in the second there was a bacillus which liquefied jelly and developed a green pigment, probably the bacillus of green pus; in the third there was a common bacillus, B. termo.

Kidney.—In six cases micro-organisms were found, in four of which the bacillus α was present associated with one or more different bacilli; in one case the bacillus of green pus was seen, and in one B. termo.

Liver.—Colonies were obtained in three cases only; in one of these cases the colonies were formed by B. termo and in the other two by the α bacillus.

Stomach and Intestine.—As might have been expected, a great variety of micro-organisms were met with in these cultures, some of them common forms which may be found in the alimentary canal of healthy persons or in that of those who have died of other diseases. In addition to those, the α bacillus was met with in eight cases. This bacillus Dr. Sternberg has not succeeded in obtaining from the digestive tract of other bodies, but he is not able to assert at present that it only occurs in yellow fever, much further investigation being needed to determine the question of its etiological relation to that disease.

Dr. Sternberg's experiments on animals having up to the present time yielded only contradictory results, he will have to repeat them before drawing any conclusions.

In the cultures from the kidney and the urine in the first case the α bacillus was associated with another bacillus resembling it. After a good deal of trouble he succeeded in separating this out and studying it in pure cultures. This second or β bacillus is shorter, and possesses the property of end-staining in a more constant and marked manner, than the α bacillus. Dr. Sternberg does not now think α is like the bacillus of Babes, as he was at first disposed to believe; it is more probable that β may be so. This forms pale-brown colonies in jelly, which have no lobulated margins like those which characterize the α colonies. The β colonies, too, grow more slowly, and in mixed cultures in jelly in Esmarch's tubes the β colonies do not begin to appear until those of α have acquired a considerable size. The characters of β will have to be gone into more thoroughly at some future time. A third bacillus, which forms flat colonies of a glassy appearance with irregular borders and wrinkled in the interior, is also mentioned as requiring further study.

In the cultures of the stomach and intestine a bacillus which liquefied jelly was obtained in three cases. This appeared to be identical with Dr. Gibier's bacillus. Dr. Sternberg thinks he might probably have met with this bacillus more frequently if he had used jelly instead of agar-

agar in his earlier cases. This bacillus, which he designates as γ, is large and oval, with rounded extremities, and, like many other micro-organisms, shows in highly colored preparations the property of end-staining. This, indeed, is common enough in old cultures of bacilli. There does not appear to be any reason for looking upon this as a spirillum, as Dr. Gibier is disposed to do. In Dr. Sternberg's cultures it has not presented the character which, the French commissioner believes, points it out as the probable cause of the disease, no deposit of black pigment having been observed in any part of the tubes—neither in cultures sown directly from those supplied by Dr. Gibier himself, nor in those obtained by Dr. Sternberg from the intestinal contents.

In three cases portions of liver and kidney were preserved in the laboratory, wrapped in muslin or blotting-paper soaked in a one per cent. solution of perchloride of mercury. The examination of the interior of these fragments at the end of forty-eight hours demonstrated the existence of numerous and various micro-organisms. In one case there was found in a specimen from the kidney a large micrococcus in tetrads, associated with a streptococcus and a staphylococcus which liquefied jelly. With this exception, Dr. Sternberg has met with no micro-organisms in any of the cultures from the interior of the body. On the other hand, in cultures from the surface he always found micrococci of various kinds.—*Lancet.*

Success of the Million-Dollar Telescope.—The great refracting telescope of the Lick Observatory, Mount Hamilton, is now in place, and had its first "official" trial on the evening of the 7th inst. The sky was clear and the weather cool. The big telescope was first pointed at the nebula in the constellation Orion, which appeared to Messrs. Clark, Swazy, Keeler and Floyd more magnificent than ever before. About twelve o'clock Saturn was also observed with satisfaction. Only medium power was used, and the observation closed about midnight.

The size of the object glass is thirty-six inches. It is the most powerful telescope in the world. A magnifying power of two thousand diameters, it is expected, can be employed on suitable objects. Applied to the moon, it is believed the new telescope will show almost anything that has a bulk of say three hundred feet square. If there are any such build-

ings on the moon as the Capitol of the United States, or such works as the Brooklyn bridge, rivers or oceans with large vessels upon them, the great telescope will reveal the fact. But unless all previous observations are greatly at fault, no water, no atmosphere, no people, exist on the moon like those of our globe. Much new and interesting knowledge may, however, be hoped for in respect to the moon and the heavenly bodies when the new instrument is fully worked.—*Scientific American.*

Gleanings.

The Influence of Etherization on the Body Temperature.—Dr. James Stewart, in *Montreal Medical Journal*, says: Dr. H. A. Hare, of Philadelphia, in the May number of the *Therapeutic Gazette*, gives an account of some very interesting and important effects of ether on the temperature of the body. In a series of twenty-six operations he found an average fall of temperature of about 2½°F., the greatest fall being 4.4°F. and the least .8°F. He concludes that the greatest factor in the causation of this very considerable reduction is the ether, and not the shock attending the operation.

The lesson to be taken from Dr. Hare's observations is, that means should be taken during the performance of operations to keep up the body heat. To leave the treatment of this state until the operation is over is, as Dr. Hare says, tantamount to "locking the door after the horse is stolen."

The importance of the application of external heat in preventing a fatal fall of temperature is well exemplified in experiments on rabbits with chloral hydrate. An ordinarily fatal dose given to a rabbit whose external temperature is maintained by artificial means has little effect when compared with the same dose given without the employment of external warmth.

On the Treatment of Sebaceous Tumors.—Many people, the subjects of congenital sebaceous tumors and "wens," object to having them removed, on the score that the remedy is worse than the disease, and the after-consequences may be serious. The following is the method I have adopted in such cases, and with marked success. With a cataract knife (Graefe's) puncture the cyst, and gently

squeeze out the contents; then introduce a very small piece of nitrate of silver. On the following day, by means of a pair of forceps, the capsule of the cyst can be withdrawn, just like the shell of a bean, without any portion being left adherent. In no case has there ever been any return of the growth, or any ill effects. The method, if tried, will be found to have many advantages apart from its simplicity and thoroughness.—*British Medical Journal.*

Nutrient Enemata.—Dr. Ewald, of Berlin, has just made known his usual method of preparing nutrient enemata. He says that in hospital practice an enema may be made most simply by beating up three or five eggs with four or five ounces of a fifteen or twenty per cent. solution of grape sugar, and this mixture may be carefully injected as most convenient. If needed, starch solution or mucilage water may be added; or, if there exists irritation, a few drops of tincture of opium. An injection of about eight ounces of tepid water should precede the nutrient enema, and the latter should not be given until the bowel is thoroughly emptied. Enemata should not be larger than eight ounces, and this quantity is best given in two or three doses during the day.—*American Practitioner and News.*

Optic Atrophy in Tabes Dorsalis.—M. Galezowski has collated 1,029 cases of atrophy of the optic nerve, of which 870 occurred in males and 159 in females. Of this number 717 were cases of locomotor ataxy, in which a syphilitic antecedent was noted 496 times. It is concluded that cases of tabetic optic atrophy comprise about two-thirds of all cases of optic nerve atrophy; that two-thirds of the cases of tabetic atrophy of the nerve are remotely related to syphilis; and finally, that, though generally incurable, optic nerve atrophy in tabes dorsalis may be arrested when it is accompanied by certain peculiar vascular alterations.—*Lancet.*

The Treatment of Whooping-cough. — Dr. R. S. Thompson lately read a paper before the Medico-chirurgical Society of Glasgow on the use of nitric acid, ergot and choral in the treatment of whooping-cough. According to an extract published in the *Glasgow Medical Journal*, he has observed benefit only from chloral, and that not in reducing the number of the paroxysms, but in mitigating their severity. In the discussion, many remedies are spoken of, and belladonna seems to have acted more favorably than any of

the others alluded to, although it is worthy of remark that one of the speakers reported that, while in one epidemic every patient had recovered rapidly under its use, in another it had appeared to be of no benefit at all—wherefore he had come to the conclusion that there was no specific for whooping-cough, an opinion that seems to have been shared by most of the speakers. Some of them even thought that the disease had to run its course, like an essential fever.—*New York Medical Journal.*

FOR NASAL CATARRH.—

℞ Chloral. hydrat, ... gr. x.
Acid. boric, ... ℥ij.
Glycerini,
Aquæ laur. ceras, . . . āā ℥j.
Aquæ, ... ℥vj.—M.
Sig.—Apply locally.

ELECTROLYSIS IN THE TREATMENT OF THE DISEASES OF WOMEN.—A very important discussion on the subject of "Electrolysis in the Treatment of Diseases of Women" took place recently at a meeting of the Obstetrical Society of Great Britain. A great difference of opinion was manifested, and the tone was rather bitter at times. Dr. Playfair spoke strongly in favor of the method, while Dr. Bantock was opposed to it. It seems strange that, after so much earnest work by very able men in various parts of the world, no very definite conclusions, which are generally accepted, have yet been reached.

We have watched carefully the reports and discussions on the subject, and must conclude that the subject is still *sub-judice*. The adherents of the method have scarcely as yet made out a case; but, at the same time, we think they should not be subjected to harsh and unjust criticisms. Let them by all means be encouraged to go on with their work, and if they are able to show definitely that electrolysis is beneficial, the profession should be in a position to indorse it heartily.

There is no doubt that the methods proposed and adopted by many are not devoid of danger. Novices should, therefore, be very careful in using it. We know the grave dangers connected with such kinds of treatment in the past, and we sympathize with those who are laboring so faithfully to overcome these dangers and place the use of electrolysis on an exact and scientific basis.

Editorial.

INSURANCE AGAINST ACCIDENT.—Life insurance is becoming more popular every year. As it becomes better understood by people, the larger is the number of persons that take advantage of it. We have not been able to consult any statistics for information, but from our own observation we feel sure that nearly ten to one insure their lives at the present time that insured fifteen years ago. But, however advantageous life insurance may be, we do not think that it is any more so than accident insurance, especially in the case of mechanics and others whose business exposes them to accidents. Indeed, to such, it seems to us it is a great boon.

Mechanics, and others who perform physical labor, can realize, by their wages, not more than from two to five dollars a day. With this sum, a person with a family can only meet expenses from day to day—self-denial has to be practiced in order to lay by anything for a "rainy day." But, while the mechanic may live comparatively well on his earnings so long as he keeps in good health and meets with no accident, yet, if he happens to gets injured—fractures his leg or breaks his arm—distress soon overtakes him. If he has laid by a little money, with the view of buying a home at some time, his savings disappear as rapidly almost as the snow before the sun. Frequently kind friends will have to give assistance, or the wife or older children must endeavor to earn something. As for paying the physician for his services, however valuable or necessary they may be, that is an impossibility until long after recovery; and maybe never.

There is not anything that tends more to instill self-respect in an individual than a feeling of independence. To be under the necessity to accept favors engenders feelings of dependence and humiliation, which are soon followed by a sense of inferiority. For men to preserve intact their manhood, they must be so situated that they can give a *quid pro quo* for all of their necessities. This a wage-worker can do usually in this country so long as he preserves intact his powers of mind and body, but if, perchance, he becomes disabled and continues so for some time, he must accept favors for which he can give no return. Either very close friends, if he should have such, or relatives, or the public must come to his assistance.

In the case of some trades, organizations have existed for some time, through which assistance can be obtained by members of good standing when reduced to distress, but relief accepted under such circumstances is attended with the feeling, to some extent, that charity is being received. Very few, if any of these organizations, are so constituted that a member of any one of them, when he becomes disabled, receives money from them or assistance of any kind, and does not feel that, to some extent, he is a recipient of charity. Coming, however, from brothers of the same order, and having been a contributor to the treasury of the order, a mechanic does not have the feeling of pauperism that he would have if he were aided from the poor fund of the township or county in which he was living.

In the case of accident insurance companies, by the exercise of an economy that will permit of the saving of five or six cents a day, which will not generally entail any material deprivation of the necessaries of life, any person who has to depend upon his daily labor for a living for himself and family, as a mechanic, physician, teacher or artist, can purchase a policy in an accident company, that will yield him, each week, when disabled by injury, an amount that will keep the wolf from the door, and for which he will feel no more under obligations than he feels for the wages he receives after having honestly earned them. In fact, if the sum to which he is entitled, that is, the amount per week for which he is insured, multiplied by the number of weeks he was disabled, should not be paid him, as wages are sometimes withheld, he can sue for it the same as he can sue for his wages. The claim, therefore, against an accident insurance company is a valid debt on the part of the company, and accepting it makes, in no wise, the subject an object of charity. Some of the most wealthy men take out accident policies.

Accident insurance operates beneficially to the interests of physicians. In many families it usually happens that physicians are compensated for their services to all of the members of the family except to the head of the family. When he is stricken down, as the income is stopped, the medical man receives no remuneration, for there is nothing with which to pay him. But this forced charity from him can be dispensed with, and has oftentimes, to our knowledge, been made unnecessary in the case of injuries by accident to the head of the family, when the latter has had the

good sense and the prudence to have purchased an accident policy. In such instances, the prudent savings of the wage-worker, before he was disabled, have been sufficient for the needs of the family, and has permitted that the proceeds of the insurance be paid to the physician. When a medical man has been called to a case of fracture of the leg, and has taken upon himself the responsibility of treatment, spending days and weeks in close attention, that the patient might recover with a useful limb, he feels, at the close of the case, that he has rendered the person most important services and is worthy of compensation. But if the party has had a family dependent upon him, and has only been able to save a small sum from his wages, all of which was consumed while he was disabled, from whence is to come his remuneration? But if the man who has just been a patient is entitled to from fifteen to twenty-five dollars a week from an accident company, he would certainly be a very mean man if he would not consent to share with the physician who had just done so much for him, and to whom he owed so deep a debt of gratitude. Besides being thus enabled to pay the doctor, at least something for his services, it would relieve him greatly from the feeling that, so far as medical services were concerned, he had not been altogether an object of charity.

But accident insurance companies are of great benefit to members of the medical profession, in that it enables them to become insured with reference to accidents. Physicians are not as liable to accidents as railroad employes, or as those who are employed in certain mechanical pursuits; but still, as they are engaged much out of doors, they are greatly exposed to serious accidents. In the country they ride much on horseback, which has its dangers, but country physicians are liable to many other dangers besides. In cities physicians may not be quite so exposed to injuries, but dangers are constantly lurking around. Now, there are some rich medical men, but they are nearly as scarce as rich preachers. There are very few who would not become seriously embarrassed by a serious injury that would disable them for a number of weeks, or several months. Living in cities is exceedingly expensive and has to be met with the money on the spot. How exceedingly convenient it would be for a doctor, either in city or country, if he should happen to break his leg, while lying in bed with his limb in splints,

to receive from an accident company twenty-five dollars a week.

But we have still more to say about accident companies, which we will say in another issue.

Decease of Dr. G. D. Trembley.—It is with much sorrow, indeed, that we announce the death of Dr. G. D. Trembley, a most estimable gentleman and physician. The demise of one so well known and so greatly esteemed, right in the midst of his usefulness, enjoying, with an affectionate family, the sunshine of prosperity, will cause profound regret. In this world of hurry there is so very much to attract the attention, that those who pass out from the midst of the living oftentimes seem to be forgotten immediately; yet those who, like our friend, have adorned their lives with many good deeds —have acted the part of good physicians—by healing the sick, relieving the distressed, administering to the suffering, restoring back to life and to friends those ready to die, make too deep impressions upon the minds of those who knew them, by the grateful feeling they have excited, to be ever entirely forgotten by those who have been recipients of their good deeds.

Having known Dr. Trembley for nearly a score of years, and sustained the relation of a teacher in medicine toward him, his death fills us with sorrow. Gentle, kind, upright, always grateful for a favor, we always admired him. And now that he has passed away, we have a feeling of sorrow that he should have to die just as he had reached the best part of his life; when his mind and energies were at their best; just as he had proven his abilities and had established himself in the confidence of men; when, having a loving family about him, and children dependent upon him, it seemed so necessary to him that he should live; when, having established a good practice, he appeared to have reached the goal of prosperity for which so many labor and regard as the chief end of life. But there is a saying which the experience of every day proves to be true—"Man proposes, but God disposes."

Dr. Trembley was born January 29, 1846, and died, we learn, June 19, 1888. When eighteen years of age, an early age to go to war, he enlisted in an Indiana regiment as a volunteer, and served his country as a soldier during the late Civil War, until he was discharged from service, May 15, 1865. It will be seen that, full of patriotism, so soon as his

age permitted his acceptance into a regiment, he shouldered his musket, and taking his life in his hands, he sought the position where duty seemed to require him most.

After his return home from the army, feeling the need of education, he entered an academy at Mendota, Ill. After acquiring a very fair education, in 1872 he began the study of medicine with Dr. C. Souder, of Larwill, Ind., as his preceptor. In due time he attended lectures at the Cincinnati College of Medicine and Surgery, and graduated at the close of the winter session of 1874 and 1875—the latter end of February, 1875. He was esteemed as a good student, and graduated with honor to himself.

About two years ago, or thereabout, we believe, he visited us, and, at his request, we made an examination of his lungs. We detected a recent, but evidently a limited, deposit of tubercles in the upper portion of his lungs, but without communicating to him fully the gravity of his case, we advised him what we regarded the best for him to do for the preservation of his health. He spent the greater part of last winter in Florida, returning apparently greatly improved in health and strength. His friends generally congratulated him on his improved appearance.

Within an hour after his return from Florida he was called to visit the sick, and continued in active practice until the day of his decease. We learn that a few minutes after returning home from making his last professional visit, he complained to his wife that he was suffering with severe pain in his right side, and almost immediately expired. We have not been informed as to what is supposed to have been the immediate cause of death.

On April 2, 1875, Dr. Trembley began the practice of medicine, and, like a sensible man and physician, on the 15th of the same month he took to himself a wife, marrying Miss Martha Bechtel. Five children were born to them; two of whom dying, three are left to mourn him. He was a religious man, and we hope that, in putting off his mortality, he has become immortal.

THE ANNUAL MEETING OF THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION will be held at Birmingham, Alabama, September 11, 12, 13, 1888. The Association will convene in the hall of the Y. M. C. A., at ten o'clock A. M. each day. The annual oration will be delivered at O'Brien's Opera House on the evening of the first day's

session, at which time the Mendelssohn Club of Birmingham will give a concert for the entertainment of the Association. Entertainments have been arranged by the local committee to take up all the hours not occupied by the sessions. Hotels and railroads will give reduced rates, but only those holding certificates, signed by the ticket agent at point where through ticket to place of meeting was purchased, will be entitled to the two-thirds reduction in return fare.

Dr. Wm. E. B. Davis, of Birmingham, the Secretary, informs us that a very large attendance of distinguished physicians from all parts of the South is expected. Besides the annual address by the President, W. D. Haggard, M.D., of Nashville, we learn by a circular Dr. Davis kindly sent us, that papers will be read by twenty-six gentlemen. Among them are the following titles: Hysterectomy in Cancer of the Uterus, by Dr. Wathen, of Louisville; Antiseptics in Surgery and Gynecology, by Dr. Meriwether, of North Carolina; Perineal Lacerations, by Dr. Baldridge, of Huntsville; The Field and Limitation, by Dr. Stone, of Virginia; Gastrotomy, by Dr. W. B. Rogers, of Memphis; Interesting Cases of Surgery, by Dr. Cunningham, of Alabama; the New Departure in Uterine Therapeutics—The Dry Method, by T. A. Means, of Montgomery.

There will be ample hotel accommodations, prices ranging from $2 to $3 a day. Medical gentlemen of the North, desirous of seeing something of the South, have a good time and increase their medical lore, can not do better than attend this meeting. Birmingham is already a great manufacturing city, and at no distant day will be the greatest in this country. All who go will be made welcome.

Quinine.—The *Medical Record*, of New York, says that it is not sure that cheap quinine is an unalloyed blessing, for that it has come to pass that nearly every family now has its quinine bottle, and it is sold at many general stores.

The statements of the *Record* agree with our experience. Nearly every person we meet, making any complaint, we find is taking quinine by his own prescription. When a person, nowadays, contracts a "cold" he prescribes for himself two, four, five or six grains of quinine every three or four hours "with great benefit." A president of a bank, a few days ago, announced to us that he had cured a "pain in his side" by taking five grains of quinine at a dose several times a day.

The therapeutic value of quinine, as the *Record* observes, is no doubt greatly exaggerated in the popular mind. In fact, taking it continuously is injurious as well as taking it excessively. We have always held that a drug that is potent for good when properly taken, is just as potent for evil when improperly taken; and that a medicine that "will do no harm if it does no good" is an inert remedy. Quinine is by no means an inert drug, and, consequently, when taken, if it meets with no morbid counteracting indication, it must necessarily disturb some of the normal actions of the system.

In 1878, when there was twenty per cent. *ad valorem* duty on quinine, 196,475 ounces were imported, for which the price was about $2.83 per ounce, and for which we consequently paid about $500,000. Last year there was imported nearly five million ounces, for which foreign manufacturers were paid only about seventy-three and a half cents per ounce, or about $4,000,000.

The Mississippi Valley Medical Association meets at St. Louis, September 11th, 12th and 13th. The first day will be given to the discussion of abdominal surgery; the second, to infant feeding and some obstetric subject; the third day will be taken up with volunteer papers and some neurological subject. The Society cordially invites all members of the profession in the Ohio Valley to be present. Arrangements are being made for reduced rates.

J. Lucius Gray, *Permanent Secretary.*

The Congress of American Physicians and Surgeons.—The Committee of Arrangements takes pleasure in announcing to the members and invited guests of the special societies taking part in the Congress that the arrangements are sufficiently advanced to assure the success of the first triennial session of the Congress of American Physicians and Surgeons, which will be held in the city of Washington, during the 18th, 19th and 20th of September next.

A number of distinguished physicians and surgeons have signified their acceptance of the invitation to attend, among whom may be named Sir Spencer Wells, Sir Andrew Clark, Sir William McCormac, Drs. W. O. Priestly, William Ord and Grainger Stewart, Mr. Lawson Tait, Mr. Victor Horsley, Mr. Thomas Bryant, Mr. Thomas Annandale, Professors Ferrier, Esmarch and Gerhardt, Drs. Rafael Lavista, of

Mexico, J. L. Reverdin, of Geneva, O. W. Holmes and H. J. Bowditch, of Boston, Joseph Leidy, of Philadelphia, W. Kingston and Eccles, of Canada.

The preliminary programs of the participating societies have been published. It is hoped that the classified and final programs will be forwarded without further delay. Several are already in possession of the Committee. As soon as all are received the final program of the Congress will be printed and distributed.

Places of meeting for the Congress and each of the societies have been secured, conveniently located, so that members may interchange attendance without annoyance.

The meetings of the Congress will be held during the evenings, beginning at eight o'clock P.M. On the evenings of the 18th and 19th the meetings will be held in the main hall of the Grand Army Building, 1412 and 1414 Pennsylvania Avenue, and on the last (Thursday) evening, in the hall of the National Museum. During this evening the Army Medical Museum and Library Building, along side of the Museum Building, will be lighted and opened for the inspection of the members and invited guests. The meetings of the societies will be held during the day, according to the program each may respectively provide. The sessions will be open to the profession.

On Monday evening, September 17, a dinner will be given by the members of the Congress to the guests of the participating societies. Invitations to this dinner will be sent only to the specially invited guests who have indicated their acceptance. The contributing members will receive cards of admission. It will be limited exclusively to members of the Congress and invited guests.

An informal collation will be served at Willard's Hotel on Tuesday evening, after the adjournment of the meeting of the Congress, to the guests and those members who may choose to attend. A similar entertainment will be served in the National Museum Building on Thursday night, after the final adjournment of the Congress.

Guests are requested to notify the Chairman immediately after their arrival in Washington, giving their address and stating whether they have ladies with them. Special arrangements will be made for the entertainment of the wives and daughters of the guests.

Hotel accommodations are ample and conveniently located to the places of meeting.

The secretaries of the special societies are requested to forward to the Chairman the names and addresses of their foreign guests.

WASHINGTON, D. C., July, 1888.

THE HARVARD MEDICAL SCHOOL.—In addition to the existing requirements for the third-year degree, each candidate will be obliged to take examinations from a list of elective studies, to be chosen at the commencement of the year. He may choose to pass an examination of two hours in either of the following subjects: dermatology, diseases of the nervous system, diseases of children or gynecology; or he may pass two examinations, of one hour each, in any two of the following subjects: ophthalmology, otology, mental diseases or legal medicine.

Dr. T. M. Rotch has been appointed Assistant Professor of Children's Diseases.

THE EXPENSES OF THE INTERNATIONAL MEDICAL CONGRESSES.—Ewald, in the *Berlin Klin. Wochensch.*, July 9, 1888, in a brief historical sketch of the International Medical Congresses which have been held, prepared for the use of the Committee on the Organization of the Berlin Congress, concludes with the following statistics of the last four meetings:

1879, Amsterdam, members, 630, printing, including transactions, $1,875, receipts for registration, $2,330; 1881, London, members, 3,181, printing including transactions, $16,000, receipts for registration, $16,460; 1884, Copenhagen, members, 1,400, printing including transactions, $5,650, receipts for registrations, $7,062; 1887, Washington, members, 2,500, printing, including transactions, $18,400, receipts for registration, $31,696.

At London a guarantee fund of $5,750 was raised, but not used.

These figures are not absolutely accurate, but they are approximately correct, and show how the expenses of the Congresses have grown, and they afford a basis of comparison for other meetings.

THE ROYAL COLLEGE OF PHYSICIANS.—On the 27th of June, the President of the Royal College of Physicians, Sir Andrew Clark, received a large and distinguished company

in the hall of the College. An interesting collection of works of art and curiosities was on view for the entertainment of visitors. Especially interesting to medical men, who, of course, formed the great majority of the gathering, was the diploma of Harvey, the discoverer of the theory of the circulation of the blood. It was from the University of Padua, and is dated April 25, 1602. There were also a manuscript book in the handwriting of Jenner, a number of relics of Dr. Priestley, many autographs of medical celebrities and some scientific exhibits. The band of the Royal Artillery, under the Cavaliere Zavertal, played a selection of popular music during the evening.

A New Breast Pump.—Auvard has invented a new breast pump, described by recent French journals, which consists of a glass bell fitting over the breast, from which a tube goes to the child's mouth, and a second and larger tube to the mouth of the mother. The mother aids the child by performing suction simultaneously with the child.

An Experiment in Optics.—A workman in a German factory claimed that through an accident, while employed in his daily labor, he had lost the sight of his left eye, and brought suit against his employers for damages. Experts pronounced the eye sound and uninjured. To prove this, words were written upon a blackboard with green ink, and the plaintiff desired to put on a pair of spectacles of which the glass for the left eye was plain white, that for the right being red. He was requested to read the writing, which he did without hesitation, thus convicting himself of fraud, as he had seen with the left eye only, it being well known that the red glass for the right eye would change the green to black, rendering it invisible. Thus does science triumph over ignorance.

Medical Colleges and Medical Ethics.—A correspondent addresses the following question to the editor of the *Journal:*

"If a matriculate continues his attendance, and conforms to all the published requirements of the college, including certificates of moral character, has the college the right legally to refuse to confer on him a diploma, on account of his

known practice of prescribing secret remedies which he compounds?"

The editor of the *Journal* replies by quoting a paragraph from the Code of Ethics, which declares that "it is not in accord with the interests of the public or the honor of the profession, that any physician or medical teacher should examine or sign diplomas or certificates of proficiency for, or otherwise be specially concerned with the *graduation* of persons whom they have good reasons to believe intend to support and practice any *exclusive* and irregular system of medicine."

We agree with the *Journal* that it is not in accordance with the provisions of the Code of Ethics to graduate an individual who has been practicing any exclusive system of medicine, or has been using secret remedies in treating diseases, and who, it is known, intends doing in the future what he has been doing in the past; yet we do not think that the question is answered by quoting an article of the Code, for it is not a legal document, and would not be recognized in the courts as having any authority. We believe, however, that a faculty of a college can exercise their pleasure in graduating any candidate for graduation, even though he has fulfilled all the requirements of graduation, as regards attendance upon lectures and furnishing certificates of character, and has passed a successful examination. Consequently, a college having the right to graduate or not to graduate whomsoever they please, without reference to the laws of the State, they can, and ought to, refuse to confer diplomas on individuals who, they have reason to believe, design to practice medicine in violation of the Code of Ethics.

A NEW MICROSCOPE.—The *Pharmaceutical Era* says that a certain druggist of their acquaintance—mentioning his name—has a new microscope. It comments as follows: "Woe to the wholesale house that attempts to sell adulterated drugs."

So valuable is the microscope in detecting adulterations, it is most astonishing to us that every retail druggist and apothecary is not furnished with one. A physician needs a microscope in his practice; but a physician who is under the necessity of keeping on hand the medicines he prescribes, needs a microscope both for its use in his practice, and for detecting adulterations of his drugs.

ALBUMINURIA IN THE UNITED STATES.—At the ninety-seventh annual meeting of the Connecticut Medical Society, Dr. G. R. Shepherd presented an elaborated statistical report on albuminuria, compiled from examinations made on supposed healthy men. The following general conclusions were drawn:

1. Albuminuria is much less frequent in the United States than in England, Stewart giving thirty-one per cent. as the general average, while ours, conducted on a much larger scale, show but two per cent.

2. The brain-workers, rather than the muscle-workers, show the largest percentage of albuminuria.

3. The urine of perfectly healthy people rarely shows albumin after food, while those who suffer from albuminuria and oxaluria are very liable to show it.

4. Privation, scanty food and clothing, with insanitary surroundings, increase the liability to albuminuria.

5. Cold bathing does increase the liability to albuminuria, though more notably so in the case of dyspeptics.

6. Severe exercise increases this liability in a very moderate degree.

7. In a large majority of cases albuminuria is not associated with kidney disease.

8. In the matter of life insurance albuminuria should be looked upon as a symptom only, and acceptance or rejection of the risk should depend on the gravity of the cause.

9. The existence of any such condition as physiological albuminuria is extremely improbable.

In consideration of the sweeping character of conclusion No. 7, it should be explained what is meant by "kidney disease."

TREATMENT OF SUMMER DIARRHEA.—What do our readers think of the following treatment for the summer diarrhea, we presume, of infants, though it is not so stated? It is said to be the treatment pursued at the Wilson Sanitarium, Baltimore. It is described, so we are told, in the *Maryland Medical Journal*, but we have not noticed it in that journal.

When the diarrhea is acute and attended with the vomiting of milk, the child is immediately taken from the breast or bottle, and no food except beef-tea is given to it for twenty-four hours. From one-twelfth to one-sixth of a grain of calomel is given hourly, for a day or two, to relieve

the irritation of the stomach and to excite the secretion of the liver—the flow of bile. At the end of twenty-four hours sterilized milk is given. If the vomiting returns the milk is stopped and beef-tea is resumed for twenty-four hours, when milk is once more given. No artificial foods are used in the Sanitarium.

In the case of a child from one to two years old the following is a very ordinary prescription, with us, of course, varying according to circumstances:

℞.	Hydrg. sub. mur., . .	grs. j–ij.
	Pulv. doveri, . . .	grs. j–ij.
	Bismuth s. nit., . . .	grs. xv.–ʒj.
	Sacch. lactis, . . .	ʒiiss.
M.	Div. in chrt., . . .	No. viij.
Sig.	One every two or four hours.	

We do not give more than twelve or fifteen of these powders, when we substitute in the place of the calomel grey powder.

Calomel is an excellent remedy in the summer diarrhea of children, but we would not care to give one-sixth of a grain every hour for two days.

The Diagnosis of Human Blood.—Dr. Henry Formad contributes an elaborate article on the comparative morphology of the blood-cells to the always interesting contemporary, the *Journal of Comparative Medicine*. Dr. Formad's studies have not led him to any especially new results, but they confirm views previously expressed as regards the size and appearances of the blood-cells, and some useful directions are given for examining blood-stains and measuring the corpuscular elements. It is a tribute to the accuracy of Gulliver's original measurements, that Formad adopts the figure $\frac{1}{3200}$ inch as the average diameter of the red corpuscle. Our author also supports the claims of the late Dr. J. G. Richardson in regard to the value of very high powers in the measurement of the blood-cells.

For testing the question whether a certain substance is blood or not, the spectroscope and chemical reagents come into play; but for the recognition of human blood the microscope alone is of any value, and the sole method yet found available with this instrument is that of measurement of the corpuscular elements. The differentiation of mam-

malian blood from that of lower orders of animals is made easy by the fact that in mammals alone is the cell round and non-nucleated. The differentiation between the blood of man and that of lower mammals depends entirely upon the micrometer.

Only the following animals have corpuscles larger than man, *i. e.*, larger than $\frac{1}{3200}$ of an inch; viz.: the elephant, great ant-eater, walrus, sloth, platypus, whale, capibara and (according to Wormley) opossum. Animals the corpuscles of which are slightly below man in size, *i. e.*, having corpuscles from $\frac{1}{3500}$ to $\frac{1}{3200}$ of an inch average diameter, are the seal, beaver, musk-rat, porcupine, monkey, kangaroo, wolf and guinea-pig. None of these are domestic animals. All other animals, including all domestic animals, have blood-corpuscles of a mean diameter less than $\frac{1}{3500}$ of an inch, and, in fact, those animals which, as a rule, are blamed for blood-stains found on the clothing and apparel of criminals (ox, pig, horse, sheep and goat), have corpuscles with an average diameter less than $\frac{1}{4000}$ of an inch.

The above facts are formulated as follows:

1. The blood-corpuscles of birds, fishes and reptiles, being oval and nucleated, can never be mistaken for human blood.

2. Fresh human blood can not be mistaken, under the microscope, for the blood of any animal, the corpuscles of which have a mean diameter of less than $\frac{1}{4000}$ or even $\frac{1}{3600}$ of an inch.

3. (*a*) If the average diameter of blood-corpuscles in fresh blood is less than $\frac{1}{4000}$, then it can not possibly be human blood.

(*b*) If the diameter is more than $\frac{1}{3500}$, then it may be human blood.

(*c*) If the blood-corpuscles, after exhaustive measurement, give a mean diameter of more than $\frac{1}{3300}$, then it *is* human blood (provided it is not the blood of one of the wild beasts referred to).

The foregoing applies especially to the diagnosis of fresh blood. With regard to dried blood, it is claimed that this can be recognized just as readily, provided it has dried quickly. Blood that has dried slowly undergoes decomposition, and its morphology can not be made out. A good liquid for remoistening blood is Müller's fluid, but perhaps the best is Virchow's solution, composed of thirty parts caustic potash and seventy parts water. At least five hun-

dred measurements should be made in order to establish the average diameter of the cells.

If the corpuscles are spheroidal from absorption of moisture, or crenated from drying, they may still be diagnosed, because such changes as seen from the tables are the same in the corpuscles of all animals, and have really their proportionate and corresponding ratio of alteration in form and diminution in size, the range or scale of diminution being always alike in the same animal.

The red blood-corpuscles that have become spherical from imbibition of liquid have thus presented in Dr. Formad's experiments the following average diameters in the various animals:

1. Man, $\frac{1}{4300}$ in.
2. Guinea-pig, $\frac{1}{4500}$ in.
3. Wolf, $\frac{1}{4600}$ in.
4. Dog, $\frac{1}{4800}$ in.
5. Rabbit, $\frac{1}{4900}$ in.
6. Ox, $\frac{1}{5600}$ in.
7. Sheep, $\frac{1}{6700}$ in.
8. Goat, $\frac{1}{8100}$ in.

These figures show that the diameter of the artificially spherical corpuscles in each animal is just about one-third less than that of the normal biconcave or disklike corpuscles of the same animals.

Dr. Formad is very positive about the value of the microscope and micrometer in determining human blood, taking much the same position as that of Dr. Richardson. Fortunately, it is not very often that the microscope is called upon to decide whether a certain stain is that of human blood or of the blood of a domestic mammal. We hardly think that a jury would convict on its testimony that the corpuscles in a clot were $\frac{1}{5000}$ inch too broad to be those of a dog or guinea-pig. Still, the opinions of experts are becoming more fixed upon this matter, and doubtless Dr. Formad's article will help to give certainty to a hitherto mooted point. —*Medical Record.*

Billroth on Mackenzie.—The *British Medical Journal* publishes the following translation of a letter addressed to the *Neue Freie Presse*, by Professor Billroth, dated March 27th:

"With reference to your respect for my opinion on Mackenzie, I can only reply that I have always warned people against passing a judgment on a man who, as a physician, occupies so difficult a position. I have never doubted the

correctness of the diagnosis of my Berlin colleagues, but I have also never been able to understand what political reasons had made it necessary to communicate this diagnosis to the whole world. It can not be admitted that Mackenzie, with his vast experience, has ever doubted the correctness of the diagnosis. If he behaved in such a way as to imply that he had some doubt about the correctness of this diagnosis, this could only be owing to pressure from above, or from motives of humanity. I know such situations from my own experience. One is not inclined to disapprove the statements of one's *confrères*, but, at the same time, one is not inclined to tell the patient that his malady is incurable, for the known want of infallibility in medical diagnosis is almost the sole ray of hope to the unfortunate incurables. Falsehood, in such cases, becomes a moral act. The entire behavior of Mackenzie must, no doubt, be judged from this point of view. He did as a man and a physician what was still possible to be done when the unfortunate word 'cancer' had already been pronounced.

"In much the same terms as these I have, on different occasions, expressed myself as to Mackenzie's conduct. I ask you to consider this as a private communication, at least until the sad catastrophe has occurred in Berlin."

CARNRICK'S FOOD.—The following remarks on Carnrick's Food we clip from a paper read before the thirty-ninth annual meeting of the American Medical Association, held in Cincinnati, by Chas. W. Earle, M.D., of Chicago, Professor of Diseases of Children, Women's Medical College, and Professor of Obstetrics, Physicians and Surgeons, Chicago. We copy these remarks because we believe they will prove interesting and valuable to the profession.

The paper appeared in full in the *Journal:*

"I have carefully examined the process of the manufacturing of this food, and believe that the greatest care is exercised in gathering the milk, and the attempt is made to insure absolute purity. The dairies from which this milk comes are under strict regulations, and as soon as the milk is received it is drawn into digesting tanks and brought to a temperature of 115 to 120°, and treated with freshly made extract of pig's pancreas. It is afterward raised to a temperature of 210° to entirely destroy any pancreatic ferments; evaporated to the consistency of condensed milk, combined

with dextrine and milk sugar; then evaporation continued powdered and bolted.

"This food is composed of forty-five per cent. of powdered milk, forty-five per cent. of dextrine, and ten per cent. of milk sugar. It is partly predigested, so that the caseine is as readily digested by an infant at it is in human milk. Dextrine is used in place of maltose for the following reasons: Detrine is not fermentable until changed into sugar. The youngest infant can supply sufficient ferment to digest dextrine, and when the process of digestion is under way, abnormal fermentation is not liable to occur. The milk is only partly predigested, because it is not advisable to entirely digest any food before ingestion. It has been claimed by Prof. Vaughn that preserved dry milk, if properly done, will keep for any length of time; and it is claimed that of the many hundred thousand cans of this food which have been placed upon the market during the past three years, not more than a dozen of them have been returned in bad order. Finally, it is claimed of Carnrick's Food that it is the only artificial food which will thoroughly nourish a child without the addition of cow's milk; that it approaches nearer human milk in composition and digestibility than any other artificial food, up to this time, that has been placed upon the market. It is also claimed that it will agree with a larger number of children than any other artificial food.

"Personally, the food has agreed with children in my practice, and has certainly "bridged over" some who have not been able to take any other food. In my experience it is hardly rich enough, however, and fat in the shape of cream must be added."

Follow Directions.—*Citizen:* "In case of a sudden illness, doctor, what ought a person to do while waiting for a physician?"

Doctor: "Well, a physician's time is very valuable, you know, and the patient ought to get the two dollars ready, so that the doctor won't be bothered with making change."

The American Rhinological Association will hold its Sixth Annual Meeting at Cincinnati, Ohio, September 12, 13 and 14, 1888. Dr. John North, Sec'y,
Keokuk, Iowa.

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Original Contributions.

Are Dipsomania, Kleptomania, Pyromania, Etc., Valid Forms of Mental Disease.*

BY ORPHEUS EVERTS, M.D.,

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Mr. President, and Gentlemen of the Association:

In complying with the request of your committee to open the discussion appointed for this hour, having had no time for more elaborate preparation, I shall content myself by a bare statement of the question as presented by the committee, my own opinions, and a few of many considerations that have seemed to me to justify them.

The question, as proposed by your committee, is:

Are dipsomania, kleptomania, pyromania, etc., valid forms of mental disease?

Do uncontrollable impulses to use stimulants, to steal, to burn, etc., develop independently of other evidences of insanity?

The alternate proposition, as I take it, is the real question; by our decision of the question as thus stated, at least, the whole matter may be intelligently disposed of.

To affirm the validity of any variety of so-called monomania; to say that a man may become utterly, hopelessly insane, in relation to his own use of stimulants, or the acquisition or destruction of goods, etc., and remain unimpaired in all other respects, is equivalent to an affirmation

*A discussion opened by Dr. Everts before the Association of Medical Superintendents of American Institutions for the Insane, at Detroit, Mich.

of the possibility of becoming insane in relation to any one subject of thought or action, and still be sound respecting all others. It implies, also, inasmuch as insanity, however limited, presumes concomitant impairment of material mechanisms (material structures only being subject to disease), innumerable independent mechanisms; and an identification of ideas by characteristics either singly or by groups, with such mechanisms, however numerous or minute.

Can such affirmations be sustained?

If the answer is yes, then dipsomania, kleptomania, pyromania, etc., may be pronounced valid forms of mental disease. If no, then this whole brood of special manias, with its prolific mother, vanishes from scientific recognition.

The testimony by which men are likely to be influenced in the formation of opinions respecting the matter under consideration is of two kinds, viz.: (*a*) Testimony derived from observation of cases; (*b*) Testimony derived from scientific inferences.

The relative value of these two classes of evidence can be estimated only by persons familiar with both.

That the testimony of science, derived from studies of a wide range of correlatable facts pertaining to any given subject, is greatly superior to that offered by the senses unsupported by science, may be inferred from the fact that many, if not all, of the opinions, notions and beliefs of mankind of all pre-scientific ages—whatever may have been the capabilities of the men of such ages; however accurate and minute their observations of isolated facts or phenomena—have been rejected as false, or modified as erroneous, by all of the advancing races of mankind, since the light of science began to fall upon their pathway.

But without further prefatory remarks, I will say my present conviction is that dipsomania, kleptomania, pyromania, etc., are not valid forms of mental disease; because I do not believe, as a matter of observation or scientific inference, that uncontrollable impulses to use stimulants, to steal, to burn, etc., develop independently of other evidences of insanity.

A good deal of testimony has been presented to me by way of observation of cases ordinarily classified as dipsomania. I have had a daily average of ten such cases under observation for the last seven years, in addition to the numerous cases seen more casually before. A large number

of opium habitues, and an occasional victim of cocaine, chloral, chloroform, and tobacco poisoning, have been observed with equal, if not greater, interest, at the same time.

It is, perhaps, needless to say that all such persons who are sent to or seek hospitals for treatment are subjects of uncontrollable impulses — better named desires — to use stimulants, or narcotic drugs; a condition either confessed or implied in every instance.

Were these persons, any, or all, of them, insane? Did they present other evidences of insanity than uncontrolled desires for intoxicants?

Were they insane, as manifested by such desires, before using intoxicants or having had experimental knowledge of their effects?

In answer to these questions, I can say, unhesitatingly, that I believe such persons, as a class, are insane. At the same time, I must say that the evidence of insanity in such cases is never limited to the single manifestation of an uncontrollable impulse to use intoxicants, or that I have never seen an instance of the fact, if fact it ever is; nor have I, of say three hundred cases treated within the last seven years, seen a single instance, historically or otherwise avouched, of uncontrollable impulse to use stimulants preceding experimental intoxication.

The evidence upon which I base my belief that these persons are insane is not alone the superficial symptoms of inordinate desire for stimulants, and an inability to resist the demand for immediate gratification, but all that such manifestations of mental impairment signify.

What do they signify?

They indicate, among other things, a voluminous sense of deprivation and want, indicative of exhaustion of energy and morbid consciousness. They indicate a general deterioration of mental capabilities, culminating in a loss of self-control and demoralization of perceptions and judgments.

They signify well-marked departures from states of feeling and modes of thinking, previously characteristic of individuals affected—the most generally accepted evidence of insanity recognizable in any given case.

I have never seen a person who had ceased to resist an inordinate desire for stimulants, that had not also become unnaturally irresolute; lacking continuity of purpose; failing in perceptions of duty; lost to all finer sense of shame and

feeling of affection; untruthful and insincere. The formerly prudent and sagacious, self-respecting and successful, business man is no longer to be trusted; if grasping and hard-fisted before, his grip is lost, and fortune falls unheeded from his unnerved hands. A woman, proud, fastidious, conscientious, sensitive to praise, to blame and shame; true to her husband and tender toward her child; yields to the impulse—neglects, forgets, wanders, is lost beyond redeeming power.

But it may be said that persons thus described are common drunkards, alcoholic dements, not to be classed as dipsomaniacs.

There are, indeed, two classes of inebriates, quite distinct in some respects, requiring separate consideration.

These two classes of inebriates resemble in being alike subject to uncontrollable impulses to use stimulants, after experiencing their effects, and in many other features. They differ as to the manner of development of such impulses and the duration of disorder manifested.

The one class comprises a large number of habitual drunkards, who have induced morbid conditions of brain and other structures by long-continued, and gradually increasing, imbibition of intoxicants without precedent organic suggestions, or the importunate demands of exhausted and depraved structures. The other, less numerous but more conspicuous, is made up of periodical drunkards, who "go on sprees"—drink deep and recklessly "while the fit is on," and return to conditions of sobriety, of longer or shorter duration, with, in many instances, a complete revulsion of feeling respecting stimulants, amounting to abhorrence—many of whom, if not all, find some excuse for their morbid impulses in the fact that they have inherited unfortunate potentialities of brain-disorder; instabilities and eccentricities of nerve-structures, nearly allied to neuroses manifested in others as epilepsy, recurrent mania, or general fanaticism.

Shall we not be compelled to make some concessions respecting the insanity of this class of inebriates? Is it not among these drunkards that we find the true dipsomaniac, whose first, last and only manifestation of insanity is an uncontrollable impulse to use stimulants?

I do not see sufficient ground for such concession. The insanities of the periodical drunkard are correlative with the insanities of the chronic inebriate, while they continue to be

manifested. The conditions of the two differ as the conditions of the periodical and the chronic maniac differ. Their differences of manifestations are as the differences of miasmatic fever—intermittent, remittent and continuous.

The fact is, mania—mad desire for drink; not for drink's sake, but for the immediate happiness, or obliviousness, known to be obtainable by drinking—however suddenly or slowly developed, is not the best evidence of insanity presented by either of these classes of inebriates. Loss of ability to resist the importunities of exhausted and dying nerve structures for immediate relief; or to so intelligently estimate the relation of consequences to causes as to be enabled to wait for better results less immediately obtainable (the highest degree of courage born of intelligence is expressed by deliberate waiting)—the loss of ability to make present sacrifice for future good, and endure some personal discomfort to save others from pain (commonly accredited to a hypothetical faculty of mind called "will")—is an evidence of insanity more significant, in my estimation, than an inordinate desire for stimulants, however expressed; because such loss implies impairment of intellectual capabilities of the highest order of development; and the question may well be asked, if the inebriate is really insane before he has sustained such loss.

Of so-called kleptomaniacs I have had but little observation. I have seen examples, however, both in and out of the hospital; belonging, evidently, to different classes.

Of those seen outside of insane hospitals, persons regarded as incorrigible thieves, and yet not held to strict accountability by society because of recognition of the uncontrollability of their impulses to steal—or the low order of their intelligence—I have not believed that any one of them was insane, or impaired by disease. They seemed to me to be persons belonging to a defective class of healthy individuals, who, by reason of arrest of development effected by lesions of nutrition, before or after birth, or the recurrence in descent of some ancestral peculiarity, had failed to reach the higher planes of mental capability occupied by the more favored classes; hence, incapable of ethical perceptions, and the self-controlling purposes of those whose actions are governed to some extent by reasoning and judgment, at the expense, sometimes, of feelings or natural desires. Because of the lower range of their perceptions, this class of persons occupy a sentimental relation to property very different from

that maintained by more intelligent and cultivated people. Impelled by a natural desire to accumulate goods (a desire that is essential to self-preservation, and pertains to the instinctive science that is inseparable from organization, corresponding to its necessities), these undeveloped, defective members of society do no violence to any sense of right by their thefts. As a matter of fact, they do not "steal." Like soldiers, in time of war, invading the country of their foes, they simply "reach for" and "appropriate" whatever they find available—they do not steal!

That persons of this class are liable to become insane; or that the natural desire to accumulate may be exaggerated by disease, is not to be denied. But before pronouncing an incorrigible thief insane, other evidence of disease than that of a dominant desire to appropriate all manner of goods and chattles, without regard to values or uses, should be looked for and found.

In asylum life we have all seen insane persons who manifested this propensity to accumulate as a phase of mental disorder, but always associated with other features of derangement.

I have three patients now under observation who exhibit well-marked depravities of consciousness and ideas respecting their relations to property.

A. B. Male—sixty—merchant—studied medicine when young, but found the profession not lucrative—formerly reputable in business relations—now impaired by long use of stimulants—not regarded as insane by family previous to admission to Sanitarium—soon after admission was detected in purloining little things that were not appropriate to his needs, and on investigation was found to be in possession of a horde of miscellaneous articles of private and hospital property, for none of which he had any immediate use, or prospective necessity. This was a surprise to everybody who knew him in his better days. Was he insane? Evidently; and subject to uncontrollable impulses to steal. But there were other evidences of insanity rapidly developed. He manifested uncontrollable impulses to tell lies, and boast of enormous wealth that he was not possessed of. Moved by uncontrollable impulses, he would sing religious songs, and talk of religious experiences. Later on, although old, emaciated, wrinkled and lame, he affects airs of gallantry toward laundry women and kitchen girls, and is, no doubt, becoming morbidly erotic.

Six months before admission to asylum, A. B. might have been classed as a dipsomaniac. Six weeks after—free from intoxicants—he might have been pronounced a kleptomaniac. He is really suffering progressive dementia, effected by alcoholic impairment of his brain and other organs.

C. D. Female—thirty-nine—widow—mother—three or four children—good society—naturally vivacious and unstable—in a state of mental exaltation when admitted to Sanitarium—regarded as "hysterical" by friends, who suspected insanity only because of a discovery that she was taking things that did not belong to her; much to their surprise and mortification. A history of the case revealed to me the fact that her then condition was a morbid state, first manifested as, what might be called, if it is not, by the French; *Folie Gynécologique;* or, by the Germans: *Mutterliebkrankheitswahnsinn,* or in plain English, *womb disease-mania,* with uncontrollable impulses to be examined and treated, locally, even surgically, by some specialist. Since admission to hospital, states of depression have succeeded exaltations, and at times she has suffered from auditory hallucinations of a distressing character. She no longer seems to be impelled to larceny, but is incapable of telling the truth, and is decidedly erotic.

E. F. Female—fifty—married—mother—good society—admitted in a state of mental depression with suicidal suggestions. For a time she complained of extreme poverty, but with improved nutrition she began to accuse everybody of stealing her garments; then claimed everybody's clothes as her property; and now laments the loss by robbery, of, as she says, "the most magnificant wardrobe ever brought in this house—sealskin cloaks, India shawls, heavy silk dresses, diamonds of untold value, etc., etc." She would would not be classed a kleptomaniac, and yet her desire for property is inordinate and morbid, and her ideas of possessory rights depraved.

Of so-called pyromaniacs among five thousand insane persons of whom I have had professional oversight, I do not recall an example of pyromania, or mad desire with impulse to burn property.

The histories of such cases, as given by others, is not thereby discredited; but analogically considered, it seems to me more than probable that in cases of this kind such

mad desires and impulses were not the only evidence present of insanity.

Delusions and hallucinations respecting fire are not uncommon features of insanity. I recall the form of one maniacal woman who cried "Fire! fire! fire!" every time she was agitated, by day or night, for many months in succession. I have known insane persons to attempt firing their clothes, bedding or other furniture; but always with some motive other than the gratification of a mad impulse to destroy, or to see things burn. I had one patient who entertained a delusion that he was doomed to die by fire. He had become insane soon after escaping from a burning hotel in St. Louis, and finally took his own life by setting fire to a bed-sheet with a match accidentally found, and inhaling the smoke and flame. I have seen madmen who entertained the delusion that the world was already on fire; and others, almost as mad, who were in constant apprehension of an impending catastrophe of the kind. But none of these lunatics would furnish examples of valid pyromania.

So much for clinical testimony.

The testimony of science bearing upon the questions under consideration, so far as I am capable of presenting it in a hastily drawn summary, may be stated thus:—

(A) All functional activities, of whatever mechanisms, are responsive to excitations of force or energy, while undergoing transmutation from lower to higher, or higher to lower, planes of activity and capability, effected by variations of motion; all concomitant phenomena being but manifestations of such changes.

(B) Continuity and homogeneity of structure, of whatever mechanisms, imply continuity and homogeneity of capabilities and functions.

(C) All brains, from the smallest to the largest, from the simplest to the most complex, are developed by continuous growths of rudimentary organs, and not by additions of new, heterogeneous and independent structures.

(D) The phenomena of consciousness, ranging all the way from simple sensation to complex thought, are concomitant with, inseparable from and correspondential to, the functional performances or work, of which brains are, alone, capable, viz.—the transmutation of vital force, or the energy of organization into psychic force, or the energy of mind.

(E) The evolution of brains being by extensions of rudi-

mentary organs, and not by superposition of successive strata, their inherent capabilities, however modified or increased by extension, are but modifications or extensions of primitive capabilities, and not additional, new and independent faculties.

(F) The order of retrogression being obverse of progression under all known circumstances—decrease of capabilities once developed, however effected, must begin with the ultimate, and proceed, retrogressively, toward the primitive. That is to say: any impairment of brain-structures affecting mental capabilities pertaining to intermediate degrees of development, necessarily affects the capabilities of all ulterior degrees of development, but not, necessarily, all anterior degrees.

(G) Capabilities of ethical perceptions, moral concepts, rational judgments, congruous imaginations, etc., in the order stated, beginning with the highest and latest attained by man, pertaining, as they do, to ultimate developments of brain-structures; all insanities effected by impairment of capabilities pertaining to lower degrees of development must, necessarily, implicate the higher, and be manifested by some degree of demoralization, depravity of judgment, incongruity of imagination, etc.

But I will detain you no longer with testimony of this character. If it is, as thus presented, of any value in this discussion, enough has already been said to quicken the motion of sensitive thinkers, and indicate the direction of investigation that may be profitably adopted by men who recognize scientific pursuit of any object as worthy of their highest capabilities, and conclusions thus reached as more trustworthy than such as are merely "jumped at" without careful consideration of the whole ground intervening.

The Rights of Medical Experts.

BY DR. SAMUEL P. DUFFIELD, A.M., M.D., PH.D.

> Wer viel weiss hat viel zu sorgen."—*Lessing.*
> [Who knows much, has much to care for.]

Mr. President and Gentlemen of the Society:—Lord Bacon has wisely said, in his Essays of Counsel, that "the greatest trust between man and man is the trust of giving counsel," and if he were in our profession and called to the witness

stand, in Wayne County especially, he would probably have added, "and no counselors are so poorly paid." This trust may always be found to exist wherever special aid is given for the purpose of informing the judgment of others. This province can not be usurped by the legal fraternity alone; they are not the only Gamaliels at whose feet the young Sauls of Tarsus must learn wisdom. A lawyer can cram, but he can not give counsel on different specialties. Physicians also, and any persons possessing special skill, often act as counselors on their individual and skilled knowledge. This class are now denominated in the courts as "experts," but so far they seem to have succeeded in being "expert" in telling all they know on the subject and not expert at getting paid for it. I know that this society will probably show a "*risus sardonicus*" when I attempt to inform them that the reason lies in our profession being "*too modest*" to demand their just dues, but before I get through I think you will all vote that I have a right to follow the old Latin maxim: "*Ridentem dicere verum, quid vetat?*" In this State, at the present time, there is a disposition to degrade the professional witness to the level of the ordinary witness, and the Board of Auditors in one county have enunciated the principle, as they foolishly suppose it to be, that $2.50 per diem is all any witness shall receive. And we must admit that this is the outgrowth of some snap opinions of judges given in the lower courts, and which, somehow or other, must be brought to the Supreme Court before the points assumed by these lower court judges can be held as of no power.

We can readily percei ve,as we read English law, where this error arose, and how it has been kept alive in even American law. In 3 Blackstone's Commentaries, 28, also in Chorley v. Bolcott, Exr. 4 Tenn. R., 317, we learn that at common law the services of lawyers and physicians then were considered as formerly, gratuitous from their nature—a doctrine derived from the civil law, where the relation subsisting between parties being founded upon the principle of a mandate, no compensation as such to the mandatory was in contemplation. Therefore the term *honorarium*, applied to the reward which a lawyer or physician might receive for services, expressed clearly that the *honorarium* was not to be regarded in the light of salary or hire. Vide Digest L, Tit. XVI.

In the article already quoted from Blackstone he claims it

to be established, by laws of England, that a counselor can not sustain a suit for his fees, and it has also been repeatedly decided that the practice of medicine is so far a merely honorary employment, that a physician can not recover any compensation for his services, but must take what is voluntarily given him. Case already cited (Chorley v. Bolcott).

This was nothing more nor less than the imitation of the jurisprudence of Rome, where the legal presumption of the immaculate character of a liberal profession was carried out to a degree of "ethical purity" which reflects the highest credit upon the civilization of that day. Honor first, last and always was the germinal idea associated with the practice of the professions, in so much (as Ordronaux remarks) that no ordinary action would lie for an *honorarium*, but the magistrate, prætor or præses of the province pronounced extra ordinem, and "according to the circumstances" (causa cognita) whether they were justly due, and if so, to what amount, or as it reads in Digest lib. L. Tit. XIII., "*Quædam enim tametsi honesto accipiantur, in honeste tamen petuntur.*" *De extra—ordinariis Cognitionibus.*

But the Cincian law, "*de donis et muneribus*," which was intended to prevent the perfidy of advocates, several notable instances of which had occurred about that time, went further than the principle of mandatum, for it directly inhibited the reception of any fee or gratuity on the part of the pleader (vide Ordronaux, page 36). But a law like this, breaking in upon the personal rights of a citizen, could not evidently endure, and in the reign of Claudius it was so modified that advocates were permitted to receive any sum up to ten thousand sesterces ($400). Physicians and midwives could *claim* their *honorarium* by the action of "extra ordinem," but no *statute* fixed the limit of their legal emoluments, large or small; the magistrate was the sole arbiter of its justice. The reason of this distinction was founded upon the superior influence of the bar as a stepping-stone to political preferment, and the increasing fashion of taking bribes which prevailed among lawyers and official personages (vide Ordronaux); but we do not hear of the unlucky doctor having a chance to take bribes *even in those* days. Now, alas! the case is far worse; the lawyers insist upon the doctor testifying at the rate of $2.50 per diem.

This Cincian law was a measure of no practical good, for under it neither suits nor elections could be carried on without bribes. But it paved the way for that amendment

under Claudius which recognized the fact that professional services have created something more than an imperfect obligation on the part of the recipient, and entitled the practitioner to his "quiddam honorarium" even through the intervention of the magistrate. Such was the high standard affixed to the exercise of a liberal profession among the most polished people of antiquity. These theoretical dogmas deduced from an age whose social fabric permitted their adoption, and suited to a civilization of less complex relations than our own, have had to give way to the more practical necessities of modern times. The increasing demand for services of a large body of men who have devoted their lives exclusively to the practice of their professions has pointed out the injustice, not to say, also, the absurdity of leaving them, as a class, remediless for value of such services as they may render the public. In a late work which I have with me, on page 256, we have the division made of "cases favoring extra compensation," and also "cases denying the right to extra compensation," and I will take the liberty to refer to them. The question of an extra compensation came before the Supreme Court of Indiana in 1877, in the matter of Buchman *vs.* State of Indiana, 59 Indiana, 1. The court held that while the physician or surgeon could be required to attend court as a witness to facts without other compensation than that provided by law for other witnessess, yet he could not be required to testify as to his professional knowledge by an attorney without the compensation of a professional fee. In the opinion of the court the professional knowledge of an attorney or physician is to be regarded in the light of property, and his professional property or services are no more at the mercy of the public as to remuneration than are the goods of the merchant, the crops of the farmer or the wares of the mechanic.

When a physician testifies as an expert by giving his opinion, he is performing, says the court, a strictly professional service. To be sure, he performs that service *under oath.* So does the lawyer when he performs any services in a cause. The position of a medical witness testifying as an expert is much more like that of a lawyer than that of an ordinary witness testifying to facts. The purpose of his service is not to prove facts in the case, but to aid the court and jury to arrive at a *proper conclusion from facts otherwise proved.*

The court then goes on to say that if physicians or surgeons can be compelled to render professional services by giving their opinions on the trial of causes without compensation, then an eminent physician or surgeon may be compelled to go to any part of the State at any and all times to render such service, without other compensation than is afforded by the ordinary witness fees. And this court does not think he can be compelled to do so. The conclusion is based both upon general principles of law and the Constitution of the State, which provide that "no man's particular services shall be demanded without just compensation." The latest case in which this subject has been considered seems to be the case of the United States *vs.* Howe, recently decided in the United States District Court for the Western District of Arkansas (12 Central Law Journal, 193). In this case, which was a prosecution for murder, a physician summoned as an expert, being sworn, refused to testify unless first paid a reasonable compensation for giving the results of his skill and experience. The court declined to regard this refusal as a contempt of court. The distinction was sustained between a witness called to depose to a matter of opinion depending on his skill in a particular profession or trade, and a witness called to depose to facts which he saw. When he has these facts, the public have a right to them. But the public can not, any more than a private person, extort services from a person in the line of his profession.

I now take up the opposite decisions, "American cases *denying* the right to extra compensation." A different conclusion to those above enumerated was arrived at in the Supreme Court of Alabama in 1875, in *ex parte Dement* (53 Alabama, 389). The prisoner on trial was charged with murder, and the physician, after testifying he had seen the deceased after he had received the wounds which the prosecution asserted had produced death, was asked to state the *nature* and *character* of the wound received, and its *probable effect*. This he declined to do, upon the ground that he had not been remunerated for his professional opinion, nor had compensation for his professional opinion been promised or secured. A fine was therefore imposed upon him for contempt of court. A motion to set aside the fine, upon the ground that the court could not compel him to testify as a professional expert until compensation for his professional opinion had been first made and secured, having been overruled, the case was taken on appeal to the Supreme Court,

which affirmed the ruling, leaving the poor expert in such an unfortunate condition that he might well exclaim with the preacher: "As it happeneth to the fool, so it happeneth to me; and why was I then more wise?"—Ecclesiastes ii. 15.

In their decision after an examination of the authorities the courts say: It will be noticed that it has not been adjudged in any of the cases cited that a physician or other person, examined as an expert, is entitled to be paid for "professional opinions." The report contains nothing to this effect. The English cases only indicate, and it is implied by the decision of Judge Sprague (in the matter of Rœlker) that persons summoned to testify as experts ought to receive compensation for *loss of time*, and that, in the language of the English statute, should be "according to his countenance and calling." It is to be observed that this case was decided two years prior to the case of Buchman *vs.* State of Indiana, in which the right of extra compensation was based upon the ground that professional knowledge is property of which he can not be deprived without just compensation—not upon "loss of time."

All these bear upon criminal cases where experts are called. According to English cases an expert is under no obligation to testify as to matters of opinion, at least in civil cases. If his testimony is desired, the party desiring it must first render him such compensation as his services are worth.

In 1883 I was ordered by the Prosecuting Attorney, James Caplis, to analyze the the stomach, kidneys, brain and bladder of Amza Newington, of Flat Rock, suspected to have been poisoned with strychnine. Having made the analysis after the method laid down by Dragendorf, I presented the bill for ratification to the Board of Supervisors. The bill amounted in total to $250. I received no reply, but saw in the *Free Press* that the Board of Supervisors had received a bill from Dr. S. P. Duffield, claiming $250 as his due; that the Board considered the bill exorbitant, and would refuse to pay Dr. Duffield, and would so inform him. Fortunately I had not rendered any report. I therefore wrote the Prosecuting Attorney that, as the Board would not allow my bill, I would refuse to testify as an expert in the case. It was then intimated that I would be compelled to, or fined for contempt of court, or even be compelled to go to jail under arrest. In this extremity I applied to my

counselor, Hon. Geo. V. N. Lothrop, for an opinion, and determined to be sent to jail, have a writ of habeas corpus take me out before the Supreme Court, and have that court either reverse the decision of the lower court or sustain it. After receiving the letter, which I will shortly read, I wrote the Board of Supervisors my determination to put the matter to the test, and after a month's delay received word that the bill would be paid if I would testify.

DETROIT, LANSING AND NORTHERN RAILROAD COMPANY,
SOLICITOR'S OFFICE.
DETROIT, MICH., May 8, 1883.

Dr. S. P Duffield:

MY DEAR DOCTOR—I should have answered your letter sooner, but I hardly knew what to write. I do not find that the point you raise has ever been decided in America, and in only one case in England. Greenleaf, in his evidence, cites the English case in a note, but does not discuss the point at all.

I am strongly inclined to the opinion, however, that an expert will not be *compelled* to testify as to matters of skill if he objects. Of course, when subpœnaed, he must obey its mandate and attend; and then, when it appears that he is called to testify, not to facts, but only to matters which call for his professional knowledge and skill, he should object to answer, and insist to the judge that he should not be compelled to answer such questions against his will. And I think the ruling of the English case would be followed.

Yet while I say this, I must admit that the *apparent* practice in this State has been the other way. Experts are subpœnaed and questioned as to matters of skill just as ordinary witnesses are to matters of fact. Oftentimes they have a special arrangement and receive special pay, but this does not necessarily appear in the case. Nor does the subpœna disclose whether the witness is called to testify to facts in this case, or as an expert. This is developed only on the examination. Hence, I say he must attend, and if it turns out that he is wanted as an expert, he should decline to answer, and submit the point to the court. If the court should require him to answer, and he should still refuse, it might result in imprisonment for contempt, which could only be reversed by the Supreme Court. But any witness who chooses to raise the question should be advised carefully by counsel at each step.

Very truly, etc.,

GEO. V. N. LOTHROP.

In the *North American Review* (for June, 1884,) appears a severe stricture upon expert testimony, by Rossiter Johnson, in which he says (page 604): "But of late years a new kind of witness, the expert, has risen to prominence, who holds himself to be a professional employé, when called into court, and entitled to pay accordingly. This claim has been allowed, with the result that might have been expected. We can call a business man, or even a professional man, into the box as an ordinary witness, use up a hundred dollars' worth of his time and give him fifty cents. But if in the same case the ends of justice require that an expert stand in

the same box and contribute a hundred dollars' worth of *his* knowledge, he wants a hundred dollars for it. 'I fail,' says the would-be logician, better surnamed Sophist, 'I fail to discover any fact or principle on which the distinction can be based.' Indeed, if there is any argument at all for a distinction, it lies the other way. A physician who follows the 'code' in refusing to patent an invention, on the ground that it should be contributed to the cause of humanity, contradicts himself when he gets into court as a *witness* and demands pay for a professional opinion. That the expert is paid by the side which calls him and not by the court, does not make the matter any better, but rather worse. It at once raises the presumption that the side having the more money will pay the higher price for expert testimony, and this practice establishes a standing bribe. Whether it is for this reason, or because the honest opinions of experts in critical cases are untrustworthy, it is not necessary to say; but one or the other of these theories must be called into account for the fact, that almost every case where expert testimony is introduced, the experts are called by both sides and swear point blank against each other. Expert testimony ought to rank high among the influences that determine verdicts; but under the present system its actual net result is almost nothing. With its continuance, the courts will soon be called upon to determine a line marking the boundary where ordinary evidence ends and expert testimony begins, and this will be found exceedingly difficult to do."

Now let us unravel the sophism of this one who, like Pistol, in the Garter Inn, retorts to Falstaff, who would not lend him a penny:

> "Why, then, the world's mine oyster,
> Which I with sword will open—
> I will retort the sum in equipages."

His argument, good for demanding services, is *weak* for demanding pay, for in refusing remuneration to the expert in order to improve his testimony, which may be called the "cheese-paring" method of justice, he has overlooked the strongest argument, and most striking analogy, found in the fact that the world has always *starved* its geniuses and sought thus to heighten their brilliancy. It is in keeping with this spirit that the lawyer claims it even-handed justice which presents a bivalve shell to each litigant and the *oyster* to himself, and compels the professional man to come into

court, testify to hypothetical absurdities called by the bar *scientific*, and dismiss him, *after some days' detentiou*, with nothing for his services. Under these circumstances it does not require the science of ophthalmology to prove the venerable goddess is *blind* and her worshipers *myopic*.

The argument that Justice does not take into account the value of a man's time when she calls him as a witness; that doctor or hod-carrier are to receive the same compensation, is fallacious, founded on the ambiguous use of the word "witness." If the medical man *saw* a fact, he can then be called as a witness; but if he is to decide whether the stain on a garment is blood or paint, he is *not* a witness. He is an expert; or in other words, he has nothing to do with connecting this blood or paint with the prisoner. The facts proven by witnesses establish this connection or overthrow it. But as an expert he simply interprets, by making legible, that which was written as blood or paint or other stains upon the clothing. He stands as Daniel at Belshazzar's feast, interpreting the mysterious, and, to the mass, unknown characters which shine out in the testimony, that can not be interpreted by lawyer, judge or jury, but require *expert* knowledge and experience to do it. Without the expert's intervention with his microscope, polariscope and spectroscope, with the vulgar crowd smelling, tasting, examining with a pocket lens, etc., you leave a legend which, if *untranslated*, places upon the prisoner a stain as damning as the spot on Lady Macbeth's hand. Says a late writer: "Lawyers and even judges only see in the medical expert a person privileged to substitute opinions for facts, and therefore valuable. Called by opposing counsel rather than the judge, answering alternately yes and no to contradictory hypothetical questions ingeniously based on *selected* facts in testimony, and so, with show of science, falsely so-called, leaving the jury more befogged than ever. *True science* asks a different definition from this, and indignantly appeals from such judgment.

Amid the multitudinous babble of men, words spoken at the end of the journey of life impress us, sometimes simply, because they are last, now and then because in those words the mind, closing its mortal tablet, sums up its life record. The late Dr. Wilbur, of Syracuse, N. Y., a vigorous thinker and an able writer on topics of social science, was a leading expert in his specialty. Only a few hours before his death, his mind being in full vigor and unconscious of the shadow

which was slowly but surely falling upon him, he penned these words:

"Expert testimony should be the colorless light of science brought to bear upon any case where it is summoned. It should be impartial, unprejudiced. There should be no *half* truths uttered, and suppression of the whole truth is in the nature of false testimony."

You may hunt over the world and yet will fail to find a better statement or in more concise form. The trouble is not so much in the experts as in the lawyers for the defense in criminal trials, who bring upon the stand men who would not be admitted as experts were the right system of examination adopted. The expert should be thorough master of his science; should be one in whom the judge has confidence, and *wholly impartial*, unprejudiced. To insure this he should be called by the court and not in the interest of either party. A true expert, in that independent, responsible position, standing in judicial impartiality, would trample under foot all motives of expediency, all mere personal considerations, and so make medical expert testimony harmonious with science, and respected in court beyond the discordant voices of the lawyers of to-day, asking like Pilate of old, "What is truth?" and yet so swayed by popular influences that they can not *receive* it. The courts of justice *permit* too much distortion of facts, etc., by criminal lawyers, and our system of juries is at fault. A recent writer, commenting on the present status of the expert, says: "The law in this country presumes that every physician is an expert in insanity and on surgical and medical cases. It even accepts the opinions of medical students, unlicensed practitioners, midwives and nurses; everything from these sources, say our learned judges, is relevant, and they trust to cross-examination to show its real importance. There are many reasons for believing this practice in law is an unwise one, especially in our country.

The medical profession in America, from whom experts are thus drawn, is a body of extremely mixed character, and is, as a whole, much more irresponsible, ignorant and untrained than that of any other of the great nations. The country is full of small medical colleges, where boys and young men of the most deficient education, after practically about two years of study, are graduated and licensed. The States, as a rule, require no evidence of character or special fitness on those who are to undertake the care of human lives, or are to be summoned officially as advisers of justice.

Medical jurisprudence is scarcely taught at all, and the chances are, if any doctor is called to the witness-stand, that he brings with him not only the prejudices of a defective education, but great ignorance of legal procedure. Yet this is only the worse side of the American doctor in practical skill. After he has made up for deficient education by experimental studies upon his earlier patients, he equals his European brethren. He is progressive, observant, earnest, and remarkably apt in the medical art. Besides, and this is a fact which helps to solve the difficulty regarding medical testimony, there are now among American physicians plenty of physicians, plenty of gentlemen who take the highest rank in scientific medicine, men whose opinions upon surgery, medicine, insanity and toxicology are as valuable as any that could be got in Europe. Why should courts, therefore, accept the *ignoramus* if they can get the *expert.*"

And now, in view of these reflections cast upon us, how can we assume that the non-payment of experts will remedy the matter? Compulsory expert testimony will bring no reform. If the courts do not pay for experts, there will not be any claiming to be experts. And if this Government claims the right to take gratis from a man that special knowledge or skill by which he gets his living, there will soon be an army of so-called experts whose every answer will be, "I don't know," "I have no opinion," "I never had such a case in my practice;" and the result would be that inferior, even uneducated men seeking to advertise themselves, would be the experts of the day.

Therefore, let the bar, with its *superior* talent, instead of seeking to do injustice by permitting certain practices among criminal lawyers, reach forth its hand, and grasping that of the honest physician, be willing searchers for that gem which is the crystallization of years of medical experience and science, realizing the guiding words of Gœthe: "Die weisheit ist nur in der warheit"—wisdom is only in truth.

The Embryo Physician as a Specialist.

BY T. H. NOTT, M.D., GOLIAD, GOLIAD COUNTY, TEXAS.

Read before the State Medical Society.

Mr. President and Fellows of the Texas State Medical Association:

This doubtless seems a singular caption for a report from your Chairman on Practice of Medicine, Pathology and

Therapeutics; but before judging me too severely, allow a word of explanation:

In the first place, I am an isolated member of this honorable body, there being no other member in less than seventy-five or one hundred miles of me, and no medical organization nearer than that, while I am without railroad or telegraphic communication with the rest of the State or world.

To get up a report of the advances made in the important branches assigned to me, under such circumstances, would be simply to cull the journals which you have read, or to give an egotistical report of my own limited experience, or to worry my brain and consume your time over fine-spun theories not yet proved by anybody.

Again, I claim that the subject chosen is at this day and time the very fittest to engage the attention and study of your Section on Practice, Pathology and Therapeutics. If I understand my duty aright, it is more to suggest those things which will the most surely and rapidly advance these branches, and which are not generally understood by the busy country practitioner, than to give a résumé of those facts and principles which have brought medicine to its present advanced position.

If this is the correct idea of our duty, then I could surely select no subject which should more seriously engage our attention than the one presented. The first point in order will be to define my subject. This may best be done by comparing what *was* and what *is* a specialist.

In the good old times gone by, a specialist was "a physician and something more." A physician who, having grown ripe in years, in knowledge and experience; who, having learned all that his co-laborers and general practical experience could teach him, and not yet being satisfied, singles out that branch for which he has proved himself best fitted, and in which he has been most successful, and by concentrating his energies, backed by a ripe experience, he pushes forward into paths before untrodden and opens up new fields of labor as far in advance of the general practitioner as the electric light is of common gas.

This gentleman is what *was* a specialist; and now what *is* a specialist? As our late retiring President of the American Medical Association happily expresses it, "Something less than a physician." A sort of one-horse doctor. Not a man who, having proved himself a physician, has a right to select

that branch for which he finds himself best suited, but one who guesses that he will make a good oculist, gynæcologist or dermatologist, as the case may be. In not a few instances his father guesses for him that he was born an oculist. Accordingly an oculist is selected as his perceptor. He finally graduates at college by scratching through on six branches, and taking the highest prize on the branch selected for his future specialty. He is now put into an eye-hospital at home for a year, then sent abroad to attend the eye-clinic of Donders, Wells, Stelwag, or some other foreign celebrity, and then returns to some of our cities to practice ophthalmology. He knows a Bright's retina, choked disk, gray atrophy blue atrophy, etc.; can talk and write learnedly of far points, near points, angles and technicalities that few of us ever heard of, and he can use a knife beautifully, for he has spent hours practicing on pigs' eyes and sheeps' eyes, and polished off with rabbits' eyes, which, I believe, are said to be most difficult to operate upon. He brings letters of recommendation from several foreign professors and from his old tutor at home. He settles in a town of twenty or thirty thousand inhabitants, which is crowded with several dozen physicians, but which will only support one oculist, and he has the cheek to ask and expect all the physicians of his city and all the surrounding towns to send him their eye cases, and to drum for him. He sends his advertisements to the country papers around, and has them printed in two or more languages. He sits back on his dignity and grows rich and famous, while we struggle for a living and a small reputation and drum for him. But why is it that he thus deceives us and the people? For two reasons—first, most of us know so little about the eye, and, second, because he operates so beautifully we take it for granted that he knows the rest. Because he can extract a cataract, straighten a crossed eye, or do an iridectomy, we believe him to be an experienced oculist. But, gentlemen, be not deceived; he is a born specialist. He knows nothing but the eye, and therefore can not know the eye. He has studied it as he would a mistletoe bough, without knowing anything of the tree, or of the atmosphere whence it derives its sustenance. True, he operates beautifully; he learned it at Wien, or Paris, or Berlin, on pigs' eyes. But does he know when to operate, or, perhaps better, when *not* to operate? And outside of the knife, what does he know? What of malaria, neuralgia, indigestion, torpid liver, brain diseases,

uterine diseases and a hundred other diseases and conditions which affect the eyes and require treatment before the eye trouble can be relieved?

To the general practitioner, ocular therapeutics may suggest a blue mass pill, twenty grains of quinine, hydrochloric acid, potassium bicarbonate, iodides, etc., as the eye trouble proceeds from derangement of the liver, malaria, indigestion, brain diseases, etc. To the oculist born, ocular therapeutics at once suggest atropine, eserine, boracic acid, together with knives, hooks and spoons of various shapes and sizes. Uterine therapeutics to our older gynæcologists may mean the major portion of our general therapeutics, while to the gynæcologist born, it alludes only to nitrate of silver, acid chromic, iodoform, carbolic acid, specula, tenacula, applications, curettes, needles, silver wire, etc.

To our older laryngologists, the therapeutics of the larynx and pharynx may suggest cod-liver oil, wine, mountains, Colorado or Florida. To the laryngologist born, it at once suggests mops, swabs, sprays, insufflators, respirators, etc. A good example of this sort was furnished me on my last visit to one of our Northern cities. The good old specialist —a man of deservedly fine reputation—was, for some cause, absent from the clinic, and his assistant, a born laryngologist, of twenty-three or twenty-four years, took charge of the clinic in the most dignified manner. The first two cases presented were two men who had not attended previously, and therefore required careful examination to make correct diagnosis. They were asked no questions, but immediately seated in front of a bright gas-jet, the specialist in front, with his brow-glass well polished and adjusted, tongue depressor and laryngeal mirror cleansed and warmed, patient's head inclined at a certain angle, mouth opened, light reflected, tongue depressed and laryngeal mirror in position, image caught and diagnosis at once rendered, together with prognosis.

Both were pronounced granular or glandular laryngitis of long standing, and would require a long time to cure, but the patients were told that if they would attend regularly three times a week for six months they would both be well at the end of that time.

Not feeling satisfied with what I had seen and heard, I followed these two young men out of the room, when I had an opportunity of making a more thorough, satisfactory examination; their histories were short and clear. They were

brothers, one between twenty and thirty years of age, and the other between thirty and forty; the elder had been in bad health for two years, the younger for one year. Both coughed a great deal, and expectorated large quantities of pus, particularly on rising in the morning; their parents both died of lung trouble. I applied my ear to the chest of the older man and heard loud, cavernous breathing; percussion also revealed a large cavity. I kept my own counsel, but was still more thoroughly convinced of the impropriety of attempting to make men specialists from birth, I may say. This also gives a very clear idea of therapeutics and pathology as seen through the eyes of the young specialist.

Now, gentlemen, I would ask, can practice, pathology or therapeutics be advanced by such men? What are their fine-spun theories worth? Is it not lowering the standard of medical education? Are such men entitled to an M. D. after their names? If one man takes the eye, another the ear, another the brain and spinal cord, another throat and larynx, another genito-urinary diseases of the male, another genito-urinary diseases of the female, another diseases of the chest, another diseases of the bones and deformities, another the teeth, another diseases of children, then there is nothing left for the general practitioner but the abdominal viscera (nothing but guts) to study. Is it possible to divide up so complex a machinery as the human system and understand one part *ad initio?* When we have studied it as a whole for years, and then isolated a single organ or system as our special study, it is with difficulty that we partially comprehend its workings, and impossible to explain many of its diseases and their rational treatment; what, then, can a man know of any part of the human system who has not studied the whole?

Again, I would ask, if the first generation of young specialists, who have been tutored by our old specialists, who were general practitioners, furnishes such examples as these, what, for heaven's sake will be the type of the second and third generations of specialists who must be tutored by these born specialists? Fortunately for mankind, this in-and-in breeding would soon extinguish the species; but, alas for our profession, we must suffer so severely from the reaction, and be thrown back a quarter or half century, and begin again to train general practitioners before we can have the material out of which to make a specialist worthy the title. This, gentlemen, must be our fate, unless we at once

discontinue this ruinous practice of attempting to born specialists, while we yet have abundance of material among our experienced general practitioners to make specialists who will be blessings to mankind, honors to our profession, and leaders and teachers in every branch of medicine. Why, gentlemen, I see from a recent number of the New York *Medical Record*, where, at a collation of the dentists in Cincinnati or Chicago, one of their profession predicts that the time is near at hand when a man will not be allowed to practice dentistry without a thorough medical education. Only yesterday, a gentleman of high culture (an Episcopal bishop) said to me: "I am afraid of a young specialist." Now, if the dentists and laymen are becoming afraid of born specialists, how much more should we be afraid of them, who know so well what they are? Can we remain so blinded to the interests of our noble calling as not to see defects so patent to the outside world? Can we afford to see our standard thus lowered while we are pretending to be so clamorous for a higher standard? Dr. G——— very happily fits Bacon's definition of a clever man to that which a specialist should be—a man who knows something about everything and everything about something. The sooner we accept this as our standard, the sooner we realize the fact that a specialist should be something more than a physician—the sooner will we be prepared to raise our standard of medical education. But so long as we allow ourselves to be deceived, and accept as our superiors men who are much less physicians, just so long will we retard our progress and retrograde our standard. In conclusion, I would say, if there are any young specialists present, that, while I intend nothing in the least degree personal, still I make no exceptions in any one's favor. The principle is radically wrong, and I am opposed to it, and hope that our young specialists will see the error of their ways before it is too late, and turn to the general practice of medicine, and make physicians of themselves before they try to become specialists.

And now, while our illustrious President and this honorable body are, from a spirit of philanthropy, using their utmost endeavors to procure legislation on hygiene, quarantine, regulating practice of medicine, board of health, home for inebriates, etc., etc., let us not forget the mass of our people who are afflicted in the line of some specialist. Let us put in a plea to keep our people out of the hands of the born specialist by inserting a clause in the article regulating the

practice of medicine which shall forbid any person to practice a specialty in this State who has not done a general practice for at least ten years.

As to the admitted ignorance of the general practitioner concerning special diseases, it is very much like the assumed knowledge of the young specialist, viz., more imaginary than real, and while it would require years for the young specialist to acquire that general experience which is so indispensable to a man who proposes to make a specialist of himself, it would require but a few months for the man who has already toiled for his experience, and who knows for what branch he is best fitted, to brush off his supposed ignorance and acquire all that is known on any special branch. A few months' private course in a special hospital under an old specialist, will make a better dentist, gynæcologist or laryngologist out of an experienced general practitioner than the man who enters the profession as a specialist can make in a lifetime.

Again, we are told by the oculists and ovariotomists, that none should dare attempt an operation for the removal of cataract or ovarian tumor except the specialist of large experience.

Now, gentlemen, these men of vast experience can not live always, and who, I would ask, are to be their successors? It reminds me of the advice of the innocent old lady to her son, that he "should never go into the water until he had become an expert swimmer."

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

THE FEVER OF OVERFEEDING (SURMENAGE).

In a most remarkable inaugural thesis, Dr. Victor M. Rendon demonstrates that this state in its symptoms very closely resembles typhoid fever; sometimes certain other symptoms become so predominant as to lead us to believe, despite the typhoid condition present, that a variola is in progress; more rarely, that a catarrhal condition is supervening in the chest.

The morbid processes with typhoid state, epiphysial pains and increase of stature of the child, called fevers of

growth, when they are consecutive to overfeeding, evident and incontestable, have the same pathogeny as the fevers of overfeeding.

The pathological conditions produced by overfeeding, are due to the alteration of the blood and the impregnation of the organism by the accumulation of extractive matters, of leucomaines; in one word, by all the waste in the non-assimilation of tissue superabundantly produced, with temporary insufficient elimination by the emunctories, which, as a rule, are generally healthy.

To the accumulation of the cadaveric matter of the organism, and to the alteration of the blood, must be attributed certain complications: the myosites, the thromboses and the spontaneous gangrenes.

The examination of the urine is, in all cases of overfeeding, an investigation full of interest, not alone on account of the quantity of urea eliminated, which is the true criterion of these pathological states, but also because the study of the toxicity of the urine of the overfed, and the study of the derivation of each of the extractive matters, with their special mode of action on the organism, throw, every day, more and more light on this question.

Rest is to be prescribed at once. It is the most efficacious remedy, and Hippocrates knew it well when he said: "*Quivis in corporis motu simulac laborare coeperit, quies confestim lassitudinis est remedium.*"

Repose is absolutely necessary, so that sleep come on and afford the necessary oxygen to the ponogene matters.

Diuretics will be ordered; sometimes an evacuant or an injection, in order to favor the elimination of non-assimilating matters accumulating in the organism; the diuretic most preferable is *milk*, which is at the same time an aliment, especially if the heart be in any way affected, and before we use digitalis, which will, however, sometimes find its uses.

The *alimentation* should be plain, and but little nitrogenous, before convalescence, so as not to overload the already encumbered circulation.

Lemonades will neutralize the lactic acid. (Revilliod.)

Tonics will be administered, but only then when the amelioration of the symptoms, the defervescence of the temperature, or diuresis with abundant discharge of urea, will prove that the elimination of the toxic products has been accomplished or is going on.

It must be well understood that although the hyperthermy

persists but slightly, nevertheless, the antithermics, as sulphate of quinine, etc., are all indicated.

In grave cases we should employ the *inhalations of oxygen*.

Finally, M. Keim advises in all cases of exhaustion from fatigue the *spirits of turpentine*, administered in the form of pearls, after the manner of Prof. Lacassayne.

The turpentine, becoming rapidly eliminated, both through the kidneys and the skin, would carry with it, especially in the urine, the extractive matters. Furthermore, it augments the oxydations, without doubt, by reason of the ozone it contains.

Frictions with vinegar may be useful in acute cases by stimulating the cutaneous secretion.

For the superacute cases we have in reserve the *bloodletting*, which, as we know, withdraws from the economy more extractive matter than any other method of elimination, with the exception of the kidneys.—*U. Med. d'Can.*

PURGATIVE FOR INFANTS.

℞	Pure cow's milk,	120 grammes.
	White sugar,	15 grammes.
	Aq. Laura Ceris,	5 grammes.
	Scammony,	½ to 1 gramme.
M.	For one dose.	—*Ibid.*

THE INFLUENCE OF COLD ON THE PRODUCTION OF PNEUMONIA AND RHEUMATISM.—CLINIC OF PROF. PETER.

Since the last few days we have received in our service a considerable number of cases of pneumonia and of rheumatism. What is the cause of the relative frequency?

Cold is rejected as an actual cause of pneumonia. In Germany its influence has been scientifically denied, and even in the Academy of Medicine these theories have found an echo.

It could be speciously proven that cold plays no rôle at all in the production of pneumonia. Take, for example, the average of pneumonias in the month of December and the average in the month of March; we see that there are more pneumonias in March than in December, and still it is well known that the former month is warmer than the latter. In our service in December, 1887, we had eight cases of pneumonia, and in March, 1888, we had fifteen. Grisolle tells us that pneumonia is most frequent in March and April.

But if we enter into the question more thoroughly, we see

that it is not the low temperature but rather the variation of temperature which produces the pneumonias.

The spring in France is only a classic idea borrowed from the Greek and Latin poets. In Paris we undergo the largest and strangest variations of temperature. The result of this is that the organism is profoundly disturbed; it resists less to these changes than to the cold of December, against which it is, in a measure, defended by the clothes. We have, in fact, the habit of putting on lighter clothes in the spring.

According to all statistics it can be readily shown that the months in which there is the least number of pneumonias are the coldest months.

We have, therefore, the variations in temperature as the true etiological factor. And it is the persons who live much out of doors who are more especially attacked: the poor, the debilitated.

How, from the point of view of the succession of phenomena after taking a cold, does a pneumonia or a rheumatism appear? It is certainly not the lung which has been chilled by the air; not the serous articulation.

It is most probable that we have here a reflex action; a sort of fluxion upon an organ which, in itself, from its structure, is less resistant, less vigorous. It is the connective tissue which only lives by hematoses, and allows it to occur passively. The lung is a negative organ, not able to do anything itself, allowing itself to be traversed by the gases, by the blood.

It is the same in rheumatism. The endocardium is less organized than the lung; it has neither vessels nor nerves. In the articulations, if there be an arthropathy present, what is affected? It is the epithelial covering, the synovial membrane —tissue of but little life. Which articulations are preferably affected? Those which are most fatigued—the knee, the wrist, the shoulder.

The endocardium is more frequently affected to the left; the left heart works more than the right. It is more particularly the valve that is affected; it moves about sixty times per minute, during the whole life.

This leads also to rheumatic fluxions.

At present, however, only microbes are incriminated. That there are pneumococci present in a pneumonic lung can not be denied. It is a fact.

That pneumonia is caused by cold can not be denied. It is a fact.

Therefore, cold produces the pneumonia, the pneumonia the pneumococci?

This pneumococcus exists in the saliva as a benignant diplococcus, and later on in the lung. Is he injurious?

How does he penetrate into the lung? He must have passed into the circulatory torrent.

All this is not very clear.

But why can not the epithelial cellules produce the pneumococcus? We have cellules which make other things; those which produce the spermatozoa, for example. This is a striking fact. And why can we not admit that the cellules of the lung can produce spores, simple organisms.

The pathogenic microbes always come from some organism; they are not in the air.

Cold produces the pneumonia.

—*Practicien, U. Med. d'Can.*

Selections.

The Medico-Chirurgical Society of Edinburgh.

ANIMAL TUBERCULOSIS IN RELATION TO CONSUMPTION IN MAN.

Thomas Walley, M. R. C. V. S., of the Edinburgh Veterinary College, said: In spite of all the attempts which have been made in the past to minimize the importance of animal consumption in its relation to this fell destroyer of the human race, the fact still remains that in every essential particular the tuberculosis of man and the tuberculosis of animals are identical. The scourge of the bovine species is the curse of the human, as it is also the pest of the feathered tribes.

A few years ago, comparatively, animal tuberculosis received but a scanty share of attention from the members of the veterinary profession in this country, and few in its ranks associated the malady with that most fatal and most intractable of all the diseases to which human flesh is heir; and, whether from the supineness exhibited by the members of the sister profession on this subject, or from the growing enlightenment of the members of the veterinary profession, I can not say, but assuredly the latter have, within the last

twenty years, taken the most prominent part in bringing the subject of tuberculosis under review.

In glancing for a brief space at the history of the disease, I need scarcely remind you, I think, of the fact that it is almost co-existent with the science of medicine; and probably, if we could look into the ages that were, we should find that its genesis was coeval with that of man.

If it is a fact that consumption in man has always held a prominent place in the literature of the medical profession, since medicine became an art, it is equally a fact that the disease has been recognized by various cognomens among veterinarians for generations and in different countries as being common to animals.

But while English veterinary practitioners and others spoke glibly of "grapes" in cows, or, referring to a well-known symptom (diarrhœa) as "shooters," and to another symptom (sub-maxillary œdema) as "wattles," and while the characteristic growths of scrofula and tubercle were in many of the northern counties in England and in some of the Scottish counties designated and known as "clyers" and "wens"; and further, while the disease was known as "angleberries," and the affected animals themselves spoken of as "piners" or "wasters," still, no systematic inquiry into its nature was made by those responsible for veterinary teaching until within the last quarter of a century. In proof of this I may quote the fact that, during his admirable course of lectures—the most complete of any that were delivered at that time—Professor Simonds, of the London Veterinary College, did not once refer to the disease during my pupil-age in the years 1861-'63; and in 1847 there occurs in the professional organ of that day, the *Veterinary Record*, the following remarkable statements, in connection with some comments on what was evidently a case of nodular tuberculosis, which had been brought to the notice of the editor by a practitioner, Mr. W. Cox, of Ashbourne. The statements are: "The tumors attached to the viscera of the thorax of a cow are similar to some we have occasionally met with", and, "On this subject our English veterinary authors are silent, and we believe the above to be the only case of the kind recorded."

In 1872 I had the privilege of reading a paper on this subject at a meeting of the West of Scotland Veterinary Medical Association, which was held in Glasgow; and again, in 1879, I included the disease in the book entitled "The

Four Bovine Scourges." On various occasions since the issue of that book I have brought the matter before the profession. During the period mentioned, other members of my profession have written upon and publicly noticed this subject, and for some years there has been, practically, unanimity among us as to the danger of transmission of the affection from animals to man. On the Continent the dangerous nature of tuberculosis was recognized at a very much earlier period than here, and we are told (*vide* Lydtin, Fleming and Van Hertsen, on "The Influence of Heredity and Contagion in the Propagation of Tuberculosis") that in the Mosaic laws special provision was made for the condemnation of the flesh of animals suffering in the advanced stages of phthisis.

The promulgation of the opinion by Laennec that the existence of tubercles was always associated with a caseous centre in some organ or other of the body, was a vast stride toward the realization of its exact causal relationship. Then came the declarations of Villemin, founded on extended experimental inquiry as to its infectious character; and following on this, I think I am correct in saying, that the doubt cast upon the nature of the disease, in animals at least, by the use of the term lympho-sarcoma by Virchow, was the means of temporarily arresting the progress of the realization of an exact knowledge of its pathology, and, I may say also, of checking the realization of the intimate relationship existing between the tuberculosis of man and animals.

In Cohnheim's celebrated dictum, "That that which is of tubercular origin can alone originate tubercle," we had sounded the keynote of a great discovery; but it again was obscured to some extent by the declaration of Sanderson and others, that tuberculosis could be produced by inoculation with many and diversified pathological products. It remained for Koch to place the crown upon the edifice of our knowledge as to the specific nature of tuberculosis, though even his grand work had been foreshadowed to some extent by other inquirers. So far as I am personally concerned, I arrived at the conclusion at an early period of my professional career, *that tuberculosis was a specific disease;* and in the essay prepared in 1872 occurs the following remark: "Tubercle is as much a specific disease as is syphilis, or any other affection depending for its continuance (existence) in the system upon a morbid poison or principle." Again,

in "The Four Bovine Scouges," p. 150, "In whatever way I consider the character of tubercle as tubercle, my mind always reverts to the same conclusion, viz.: that tubercle is as much a specific disease, whether inherited or acquired, as glanders, syphilis, or any other affection of the kind with which we are acquainted."

Long before Koch's discovery, or rather his recognition of the tubercle bacillus, veterinary surgeons were acquainted with the fact that the tubercular nodules, so universally met with in the lungs of sheep, were simply a pathological expression of the effects of a parasitical irritant in the shape of the embryo of the Strongylus filaria; and it would have only been a logical sequence had some one who had carefully considered the matter arrived at the conclusion that the cause of tubercle as tubercle was an irritant; that that irritant was an organized entity in the shape of a bacillus, or that the irritant had some connection with such an organism—a secretion or product thereof, perhaps; that the irritation so produced established a localized exudative inflammation followed by a formative process, which, however, only attained to a certain degree of perfection; and, in consequence of the continued irritation and of the imperfect nature of the cell structures produced, that it was followed by a retrograde change which culminated in the recognizable caseous and calcareous products with which we are all so familiar.

Not only would such a line of reasoning have led us to the discovery of the true nature of tuberculosis, but it would have shed a flood of light upon much that was obscure in reference to the nature of glanders, actinomycosis, and other forms of that group of diseases now classified as the infective granulomata. Moreover, it would have been the means of leading us to discard, at an earlier period than we did, the, to us, distinctive terms "gray," "yellow," and "infiltrated" tubercle—terms which of themselves signified only the features presented at different stages of its growth of one and the same product. And even if it had not justified us in preserving a strict adherence to the expression used by myself in "The Four Bovine Scourges," to the effect "that tubercle is a visible local manifestation of a constitutional diathesis (scrofulosis)," it would at least have led to the inquiry, What is the essence of scrofula?

In order that the members of this Society may the more readily realize the intimate connection which exists between

animal and human tuberculosis, it is advisable that I should consider at the outset some questions of a general nature, such as the species of animals most liable to tubercle, the means by which it is propagated, the organs affected, its course, its effects on the system, its microscopical characters, and its complications.

(1.) *Species of Animals Affected.*—It is universally acknowledged that the members of the bovine species are pre-eminently the hosts of tubercle. In them it has been thought to be indigenous; though why bovines should be more predisposed than other animals is not easy of explanation, except, perhaps, the fact that their complicated stomach may afford a resting-place for the bacilli, or that there may be some element in the bovine constitution favorable to their support—in other words, that the doctrine of *receptivity* applies in this case more powerfully than in that of animals of other species. Looking at the fact that the sheep bites more closely to the ground than does the ox, we should be inclined to think that ovines stood a greater risk of ingesting the viruliferous principle with their food than do bovines, but it is a most remarkable fact that the former are seldom found to be the subject of naturally contracted or spontaneous tuberculosis. Indeed, I may say that of all the domesticated or semi-domesticated animals whose flesh is used for human food, the sheep stands out from the group as the one least liable to tubercle; and this is all the more remarkable seeing that this animal is so intimately associated, in many cases, with cattle and with rabbits, a creature pronouncedly predisposed to, and very largely the subject of, tuberculosis.

Koch's discovery of the tubercular bacillus has, as I have before remarked, given us a more accurate basis upon which to found a diagnosis; and several continental pathologists, notably Johne, have, within the past few years, discovered its existence in the lesions of so-called lymphadenoma; while, during the past year, my colleague, Professor M'Fadyean, demonstrated the bacilli in what appeared to be lymphadenomatous nodules in the spleen of the horse.

Of poultry, tuberculosis claims a holocaust of victims, and microscopically it presents in these animals some remarkable divergences from the recognized characters of tubercular products in the ox and in man. My first intimate acquaintance with avin tuberculosis was about the year 1865; but several years prior to that date I had seen cases

which to the naked eye presented features closely analogous to the disease, and that more particularly in the rook.

Amongst the semi-domesticated animals the rabbit takes the foremost place as the host of tuberculosis.

As a boy I was accustomed to see myriads of tubercular nodules in the livers of rabbits, and so much was I impressed by the fact, that in the essay already alluded to as having been read by me in 1872, I suggested that there was a possibility of contamination of pastures by the fæcal matter of these animals. Guinea-pigs are especially predisposed to tuberculosis—at least by artificial infection—and the same may be said of monkeys, in which animals the lesions approximate perhaps more closely to those seen in the human subject than they do in any other animal.

The propagation of tuberculosis is effected in a variety of ways—by congenital and hereditary transmission, by ingestion of contaminated foods or water, *i. e.*, naturally or experimentally; by natural or experimental inhalation, by accidental and intentional inoculation, and by intravenous injection.

The possibility of congenital transmission of tuberculosis occurring was for a long period denied, but there are those amongst human pathologists who believe in such a possibility, and who assert that it does occur, while veterinary pathologists have at different times adduced practical facts in proof of such a possibility. It has not as yet fallen to my lot to witness congenital tuberculosis, but I have seen it in animals at such an early age as to lead me, perforce, to the conclusion that it must have had an *intra-uterine* origin.

Mr. M'Gillivray, of Banff, has put on record evidence of the fact that congenital transmission takes place, and some six years ago I received a communication from a late pupil of my own, Mr. Frank Ashley, giving me details of some cases in a valuable herd of shorthorns, which were under the care of Mr. Carter, of Guildford, and in which young calves developed symptoms of tubercular meningitis and pulmonary tuberculosis within a few days after birth. Why doubt as to the probability of such transmission taking place should be entertained, in view of our knowledge of the existence of tubercular orchitis and oöphoritis in animals, and of the existence of bacilli in the blood, with the ready transmission of the anthrax bacillus (a much larger bacillus than that of tubercle) from the mother to the fœtus, I can not understand. Several years ago a lady of my acquaintance

purchased a setting of eggs from a poultry-yard which I knew was infected, and shortly after the birth of the chickens they showed evidence of the existence of the disease, and very quickly the other poultry on the premises became affected.—*Medical Journal and Examiner.*

Case of So-Called "Spontaneous Combustion."

BY J. MACKENZIE BOOTH, M.A., M.D.

THE term "spontaneous combustion" has been applied to two conditions: first, spontaneous ignitability, and, secondly, increased combustibility; and I need hardly say that it is to the second category that the present case belongs. As Dr. Ogston remarks on these cases, the subjects were all found dead, their bodies, their clothes, and the articles in their neighborhood being partially or entirely destroyed by fire, the only remarkable thing about them being that the bodies were burnt and charred out of all proportion to the neighboring objects, and to an extent which seems incapable of being accounted for by the heat of burning clothes and objects in the vicinity.

On the morning of Sunday, Feb. 19, I was sent for to examine the remains of a man, A. M., aged 65, which were found in a hayloft. This man, a pensioner, of notoriously intemperate habits, had been seen, at nine the night before, to enter the stable below in an intoxicated condition, and he asked the lad and girl, who saw him, to shut the stable door after him, which they did. They then heard him ascend the ladder leading to the loft above, and afterward saw the skylight of the loft lighted, and, later still, the light put out. Between eight and nine o'clock next morning the wife of the proprietor of the stable, living near by, happening to look out of the window, observed smoke issuing from a hole in the roof of the loft. She informed her husband of the fact, and he on entering the stable, was horrified to see through a hole in the loft floor the remains of the old soldier perched on the joists above, and leaning against the wall. The police were at once communicated with, and I was sent for to attest the accident. I found the charred remains of the man reclining against the stone wall, and kept only by one of the joists and the burnt remnant of the flooring under him from falling through into the stable beneath. What

struck me especially at first sight was the fact that, notwithstanding the presence of abundant combustible material around, such as hay and wood, the main effects of combustion were limited to the corpse, and only a small piece of the adjacent flooring and the woodwork immediately above the man's head had suffered. Several of the slates had fallen in over the corpse, making a small hole in the roof above it, and a small piece of the flooring immediately round him had fallen through into the stable below, leaving the hole through which he had been first seen. The body was almost a cinder, yet retaining the form of the face and figure so well that those who had known him in life could readily recognize him. Both hands and the right foot had been burnt off and had fallen through the floor into the stable below among the ashes, and the charred and calcined ends of the right radius and ulna, the left humerus, and the right tibia and fibula were exposed to view. The hair and scalp were burnt off the forehead, exposing the bare and calcined skull. The tissues of the face were represented by a greasy cinder retaining the cast of the features, and the incinerated mustache still gave the wonted military expression to the old soldier. The soft tissues were almost entirely consumed, more especially on the posterior surface of the body, where the clothes were destroyed, and the posterior surfaces of the femora, innominate bones and ribs exposed to view. This was doubtless in a measure caused by the falling of the slates on the body, and a more perfect cinder would have been found had we arrived earlier on the scene. Part of the trowsers on the anterior aspect of the legs, that had escaped the impact of the slates, was still represented in cinder.

Regarding the condition of the internal organs, I much regretted having been denied the opportunity of investigating their condition, as wishing to have a photograph taken of the remains prevented me at the time, and on my return from other work, later on, I found that the whole had been removed. The bearers told me that the whole body had collapsed when they tried to remove it *en masse*. From the comfortably recumbent attitude of the body, it was evident that there had been no death struggle, and that, obfuscated with the whisky within and the smoke without, the man had expired without suffering, the body burning away quietly all the time.

So much for the condition of the corpse. That strange fact remains that while round about in close proximity were

dry woodwork and hay, loose and in bundles, these had escaped, and the body of the man was thoroughly incinerated.

That increased combustibility exists can not be denied, though at first sight it is not so clear to what it owes its existence. In the doctrine that increased combustibility in bodies is due to excess of fat, Dupuytren has advanced the only explanation capable of setting the subject at rest, and on a true basis explaining rationally and philosophically the cases of so-called "spontaneous combustion."

When we consider the amount of fat some bodies contain, the subject grows even clearer, and a review of the cases demonstrates that the incineration was always most extensive in the skin and subcutaneous adipose tissue, and other places where fat is abundant, and least marked in organs and regions with less fat. The fatty degeneration of various organs and structures, the inter-muscular and subcutaneous adipose tissue, along with the masses deposited on other parts of the body, all present a body of oleaginous matter amply sufficient to account for the combustion, and which, when once ignited, would tend rather to burn *in situ* than to flow out, thus explaining the greater destruction of the corpse than of objects in the vicinity.

Regarding the influence of alcoholic indulgence in these cases, it has been conclusively proved that tissues soaked in alcohol do not burn more readily than others not so treated, and that it is only as a stupefying agent, and in its tending to the deposition of fat in the body, that alcohol aids in increasing its combustibility.—*Brit. Med. Jour.*

A. Y. P. Garnett, M.D.

Alexander Yelverton Payton Garnett, M. D., of Washington City, was born in Essex County, Va., September 19, 1820, and died suddenly of heart failure, at the Bright House, Rehoboth Beach, Delaware, on the evening of July 11, 1888. He was the son of Muscoe and Maria Wills Battle Garnett, who resided on a productive plantation near the Rappahannock River. One brother, an eminent lawyer, resides in Richmond, Va. As was the custom with well-to-do Virginians, when the doctor was a youth he was taught by private instructors in his father's house. There he acquired a substantial education, including a knowledge

of the classics and French. Having selected medicine as a profession, and having read over the text-books, he attended the usual course of lectures at the University of Pennsylvania, and received therefrom the degree of M.D., in 1841. His thesis submitted to the faculty on that occasion was on "Extra-uterine Gestation."

Shortly after obtaining his degree he presented himself before a Board of Naval Surgeons, and, having passed a satisfactory examination, was commissioned an Assistant Surgeon in the United States Navy. In a few years he was promoted to Post-Assistant Surgeon. After serving for five years at sea in different parts of the world, he was stationed at the Navy Yard in Washington. Having married, and desiring to be with his family, in 1848 he resigned from the service, and began practice in Washington. In 1851 he was enrolled as a member of the Medical Society of the District of Columbia, and also a member of the Medical Association of the District of Columbia the same year. He joined the Pathological Society about the same time, and in 1852 he was elected its secretary. In these he held in succession the various offices, including that of the presidency. In 1852 he became a member of the American Medical Association, an organization to which he was much attached, and attended its meetings in 1853, '56, '68, '70, '76, '81, '83, '84, '85, '86, '87 and 1888. The last year he was the president-elect and presiding officer, and delivered, on the occasion of his taking the chair, a most able address.

Dr. Garnett was one of the original members of the American Climatological Society, and presented to it some able papers, and had one in course of preparation to be read at its next meeting. About 1858 he was appointed physician to the United States Penitentiary, which then, and until after the war, stood at the foot of Four-and-a-half Street. The remaining parts of the old prison are now inclosed within the Arsenal or United States Artillery parade grounds. In 1858 he was elected Professor of Clinical Medicine in the National Medical College. Dr. Garnett "went South," as it is generally phrased, at the beginning of the war between the States, and, of course, vacated his chair in the medical faculty. During the Civil War he served as surgeon in the Confederate States Army, and was placed on duty in Richmond and had charge of two hospitals, and was at the same time a member of the Board of Medical Examiners for the Confederate Army. His professional ability, his character

as a man, and his elegant address made him a favorite, so that he was much employed as a family physician as well as sought after by the heads of the Confederate Government and officers on duty at Richmond. He was not only the physician and valued, trusted friend of Jefferson Davis, President of the Southern Confederacy, but of General Lee and his family, and most, if not all, the families of the Cabinet Officers of the Confederacy. He remained at the post assigned him until the surrender at Appomattox, and a new order of things assumed control. The cause for which he staked life and fortune was lost. But the Union was saved. With health shattered, but with a brave heart, he returned to Washington a poor man, to begin life, as it were, again. Dr. Garnett had, before the war, by his energy and devotion to his profession, acquired considerable property in Washington. His life estate in this was, as a matter of course, confiscated by the Government of the United States. He was, however, enabled, after a time, to repurchase a portion of his property, and in this way saved something from the wreck.

Some time after resuming his practice he was elected to the Chair of Practice in the National Medical College, which he filled with ability until he resigned in 1870, because of the increasing demand upon his time by professional engagements, when he was elected Emeritus Professor, which position he held at the time of his death. He was always a well-prepared, fluent, graceful and entertaining lecturer, because he was a constant and careful reader of the latest and best works available.

Dr. Garnett's practice in Washington, as it had been in Richmond, was largely among the élite, the wealthy and the more cultured classes, although he never refused his services to the poor, or took a fee from a poor soldier. In the sick-room he was sympathetic and encouraging; in his diagnosis he was thorough and searching, and in remedies heroic, when such a course was demanded. To his patients he gave the most conscientious attention, in season and out of season. Nature, as well as education and training, had made him the efficient friend of the sick, ever suggesting for them means to hasten their recovery and afford to them additional comforts in their confinement.

Among the public institutions in Washington with which Dr. Garnett has been actively connected, are the Columbia Hospital for Women, and the Children's Hospital, in which

he was one of the Board of Directors, as well as one of the consulting physicians. He has also served on the consulting staff of the Garfield Hospital since it was opened, and for many years he has been consulting physician to St. Ann's Asylum for Foundlings, the Central Dispensary, and Emergency Hospital, of which he has been one of the consulting physicians ever since it was founded.

Dr. Garnett, while devoted to his profession, and fully accepting the obligations which a fulfillment of its duties demanded, was, nevertheless, public-spirited, and identified himself with all measures which interested the public and promoted the welfare of the city. In such matters he would lend his influence, give his time, and use his voice and pen.

In 1874 he was chosen president of the Southern Memorial Association, of Washington, and delivered a most eloquent oration on the occasion of the reinterring of the remains of the Confederate dead, who had fallen during General Early's advance upon Washington. The doctor was a ready and agreeable writer, and frequently availed himself of the daily paper to present views of questions he deemed desirable to have brought to the attention of the public. On medical matters he was punctilious, and whenever he wrote upon these, they were sent to medical journals. All his writings show the scholar and the gentleman. His contributions to medical literature are numerous and valuable, and on a great variety of topics. Dr. Garnett never limited the field of his professional labors to any one branch. He was—and felt himself to be—a physician fully equipped and capable to perform good service in any department. Of late years, because of his eminence and large experience, he was much sought after by the younger men as a consulting physician. In difficult cases his qualities as a great physician came promptly to the front, for his analytical power in diagnosis, his memory of similar or analogous cases, either in his practice or his reading, and his ever ready resources to supply more effective remedies than had been tried, gave him a leading position.

Dr. Garnett, while in all the affairs of life according the greatest possible deference to the opinion of others, was himself never neutral or indifferent on live issues. He possessed matured opinions on most subjects, the result of reading and reflection, or would take pains to inform himself, and never hesitated to express his convictions on all proper occasions. He was a charming conversationalist, a

ready debater, and a polished writer. Dr. Garnett's labors to make the Ninth International Congress a success will long be remembered, as they were highly appreciated, by the medical profession throughout the world. Throughout the United States his name has been almost a password and shibboleth of ethical honors and of loyalty to the profession. He was, from the inception of the project for the International Congress to meet in the United States, a zealous and untiring friend of the movement, and was one of the most active members of the Executive Committee, and as Chairman of the Local Committee of Arrangements acquitted himself with ability and to the entire satisfaction of the Congress and the citizens of Washington. And lastly, as a member of the Committee of Publication of the Transactions, whose labors are well-nigh completed, he has rendered most valuable services. He was zealous and loyal to duty, heroic to the last. "The end crowns the work."

While in the navy he was united in marriage to Mary E. Wise, the eldest daughter of the Hon. Henry A. Wise, one of Virginia's great governors. They had five children who grew to maturity. His wife and two children, only, survive, Henry Wise Garnett, one of our leading lawyers, and Miss Anne Garnett. The profession and the citizens of Washington will remember the early and lamented death of a son, young Dr. A. Y. P. Garnett, two years ago, who had but just entered upon practice.

The Medical Society of the District of Columbia met in special session, which was largely attended, when resolutions were passed expressive of the loss the Society and community have sustained in the death of Dr. Garnett. Many members spoke feelingly of him, and a sketch of his life was read. Drs. Hagner and Acker described his condition for some weeks before he left the city. Dr. J. B. Hamilton pronounced an admirable and deserved eulogy upon the deceased, which was supplemented by some most eloquent and beautifully expressed sentiments delineative of the character and professional life of Dr. Garnett. The Board of Directors of the Children's Hospital have held a special meeting, and passed appreciative resolutions on the character of the doctor, and on his long and valuable services to that Institution. Also a special meeting of the Directors of the Central Dispensary and Emergency Hospital has been held, at which appropriate action was taken expressive of a sense of loss and of a high appreciation of the character of

Dr. Garnett. Meetings have been called by other medical institutions with which he was connected, and will in due time report appreciative resolutions.

The funeral of Dr. Garnett took place on Saturday, July 14, from Epiphany Church, which was filled with former patients and sincere friends, who desired, in some way, to testify their respect for his memory. The services at the church were conducted by the Rev. Dr. Platt, of New York, assisted by the Rev. Dr. Leonard and Rev. Dr. Phelps. Dr. Garnett's remains were followed by a large cortege to their last resting-place in Rock Creek Church Cemetery.

J. M. T.

On the Treatment of Habitual Constipation of Infants.

BY EUSTACE SMITH, M.D., F.R.C.P.,

Senior Physician to the East London Children's Hospital, etc.

Sluggishness of the bowels in infants is a common source of trouble in the nursery, and the derangement is one which it is not always found easy to overcome. Occasional aperients in such a case give only passing relief. The bowels, indeed, are unloaded for the time, but when the action of the aperient is at an end, they are left no less sluggish than before. Habitual constipation is very common in infants who have been brought up by hand; and on inquiry, the trouble will often be found to date from the time at which bottle-feeding was begun. Still, infants at the breast are not exempt from this annoying derangement. A deficiency of sugar in the breast-milk, or, as it is sometimes seen, a milk the curd of which makes a firmer clot than is common in human milk, will often cause habitual torpor of the bowels which resists treatment with some obstinacy.

It is, no doubt, to improper, or at any rate inappropriate, feeding that the bowel trouble is usually to be referred. An excess of starch in the diet, or any food which overtaxes the child's digestive power, and thus burdens the alimentary canal with a large undigested residue, may set up the costive habit. By such means a mild catarrh of the intestinal mucous membrane is excited and maintained. There is excess of mucus, and the fæcal masses, rendered slimy by the secretion, afford no sufficient resistance to the contrac-

tions of the muscular coat of the intestines, so that this slips ineffectually over their surface.

Another cause of constipation is dryness of the stools. Even in the youngest infants the evacuations may sometimes be seen to consist of little hard round balls, often the size of sheep droppings, which are passed with difficulty every second or third day. This form of costiveness is generally due to insufficiency of fluid taken. The food is made too thick, or the needs of the system in the matter of water are in some way overlooked. But whether the constipation be due originally to excess of mucus or deficiency of fluid, it can not continue long without affecting injuriously the peristaltic movement of the bowels. As the colon grows accustomed to be overloaded, the intestinal contents can no longer exert a sufficiently stimulating influence upon the lining membrane, and the muscular contractions begin to flag. If the infant be poorly fed and badly nourished, this languor of muscular contraction may be aggravated by actual weakness of the muscular walls; and as under these conditions the bowel is apt to be overdistended by accumulation of its fæcal contents, the expulsive force at the disposal of the patient is seriously impaired. Constipation, resulting from the above causes, is often made more obstinate by the infant's own efforts to delay relief. A baby whose motions are habitually costive knows well the suffering which undue distension of sphincter will entail, and often yields to the desire to go to stool only when it is no longer possible for him to resist it. The pain is sometimes aggravated by the formation of little fissures about the anus, and the violent contraction of the sphincter, set up by the presence of those fissures, forms an additional impediment to free evacuation.

There is another form of constipation in infants which we should always be vigilant to detect. This is the torpidity of the bowels induced by opium. In well-to-do families the use of soothing syrups and other narcotic preparations is now less common than was at one time the case; but now and then we find a baby drugged, for reasons of her own, by an unscrupulous nurse, and showing the earlier symptoms of narcotic poisoning. So long as the sedative continues to be given the bowels are costive, the child often vomits, his relish for food in great part disappears, and he lies, with pupils firmly contracted, in a dull, heavy state, from which he can not easily be roused. In young babies, the use of opium seems to lessen the action of the kidneys, the urine

is scanty, and on examination of the surface of the body the healthy elasticity of the skin will be found to be seriously impaired. When pinched up between the finger and thumb the skin lies in loose folds on the abdomen, or only slowly recovers its smoothness. If this inelasticity of the skin be noticed in a baby whose pupils are closely contracted, and who seems habitually heavy and drowsy, with little relish for his food, it is well to remember that these symptoms may possibly be due to the action of a narcotic.

An infant whose bowels are habitually costive is not necessarily injured by the want of a daily relief. Often the child seems perfectly well in health, and except for occasional local discomfort, when he gets rid of an unusually large or hardened mass, may appear to suffer no inconvenience at all. In other cases there is flatulent distension or frequent colicky pain, the child sleeps badly, has a furred tongue, and cares little for his food; the motions are often light colored from undigested curd, and are passed with violent straining efforts, during which the bowel may prolapse or the navel start. This straining is a not uncommon cause of hernia.

In remedying this condition attention to the feeding and clothing of the baby is of little less moment than the use of drugs. When the infant is at the breast, a teaspoonful of syrup given three or four times a day before a meal will often quickly restore the normal regularity of the bowels. If the stools are habitually dry and hard, we should see that the child takes a sufficiency of liquid with his food. In addition, it is useful now and then to make him drink some plain filtered water. In the case of a baby in arms, the possibility that the child may be thirsty and not hungry seems rarely to be entertained; but in warm weather, when the skin is acting freely, the suffering amongst young babies from want of water must often be acute. At such times the urine is apt to be scanty and high colored, and may deposit a streak of uric acid on the diaper. When fluid is supplied, the secretion both from the bowels and the kidneys quickly becomes more healthy; and a dessertspoonful of some natural saline aperient water, given at night, aids the return of their natural consistence to the stools.

The form of constipation which is due to mild intestinal catarrh is common enough in young babies. This is owing, no doubt, in a great measure to overabundant feeding with starchy matters, or to the giving of cow's milk without

taking due precautions to insure a fine division of the curd. Still, it can not be denied that we sometimes find the same derangement in infants whose diet is regulated with proper care and judgment. In them the intestinal catarrh is frequently the consequence of exposure, for the sudden withdrawal of all protection from the lower limbs and belly, which the process known as "short-coating" too commonly involves, is a fruitful cause of chill. In children so denuded, the feet, and even the legs as high as the knees, may be quite clammy to the touch. Under such conditions the susceptibility of the patient to alterations of temperature must be extreme, and the bowels are, no doubt, often kept in a state of continued catarrh from rapidly recurring impressions of cold.

Where the constipation is due to this cause, our first care must be to protect the infant's sensitive body so as to put a stop to the series of catarrhs. To do this it will not be sufficient to swathe the body in flannel. The legs and thighs must also be covered, for a lengthened experience of these cases has convinced me that so long as a square inch of surface is left bare, the protection of the child is incomplete. We should next see that the infant's dietary is regulated with due regard to his powers of digestion. Excess of starch must be corrected, and it is best to have recourse to one of the malted foods. Mellin's food is especially valuable in cases where there is this tendency to constipation, as in many children the food has a very gentle laxative effect; but as Mellin's food contains no unconverted starch, and can do nothing to prevent the formation of a dense clot when the curd of milk coagulates in the child's stomach, it is advisable, when giving it with milk, to insure a fine division of the curd by the addition of some thickening material such as barley water. A child of six months old will usually digest well a good dessertspoonful of Mellin's food, dissolved in milk, diluted with a third part of barley water. A certain variety in the diet is of importance in all cases where the digestive power of the infant is temporarily impaired. Therefore, it is advisable to order an additional food to be given alternately with the Mellin and milk. Benger's "self-digesting food" is useful for this purpose, and rarely disagrees. It must be given, like the Mellin, with cow's milk, but without barley water, for the pancreatine it contains has a digestive action upon the curd, and removes the tendency of the latter to firm coagulation. In addition to the above,

if the child has reached the age of ten months, he may take a meal of veal broth or beef-tea once in the day, and with this it is advisable to give some vegetable, such as broccoli or asparagus, thoroughly well boiled. At this age, too, the milk for the morning meal may be thickened with a teaspoonful of fine oatmeal, and sweetened with a teaspoonful of malt extract. In the case of many infants suffering from habitual constipation, the appetite is very poor, and great difficulty is found in persuading them to take a sufficient quantity of nourishment. This indifference to food is almost invariably associated with coldness of the extremities, and usually disappears when measures are taken to supply necessary warmth to the feet and legs.

In all cases where an infant's bowels are habitually costive, it is of the first importance to enter thoroughly into these questions of clothing and diet. In addition, care should be taken that the bowels are regularly stimulated by manipulations from without. The sluggishness of peristaltic action, which forms a part of every case of habitual constipation, may be very materially quickened by judiciously applied frictions. The nurse should be directed to rub the child's belly every morning after the bath. She should use the palm of the hand and ball of the thumb, and, pressing gently down upon the right side of the abdomen, carry the hand slowly round in a circular direction following the course of the colon. The frictions may be continued for five minutes. In obstinate cases the child may be laid down upon the bed, and the bowels gently kneeded with the thumbs placed side by side; but in this case, too, the movements should follow the course of the larger bowel.

In addition to the above treatment, more special measures have often to be employed. These may be divided into two classes: the class of suppositories and injections, and that of remedies given by the mouth.

The class of suppositories and injections aims at producing an immediate evacuation of the bowel, and in no way tends to promote more regular action in the future. These remedies are, therefore, useful in clearing the way for further treatment, but there their value ends. A suppository of Castile soap introduced into the rectum is a time-honored method of inciting an evacuation in the child. Another old-fashioned plan has lately been revived, which consists in the injection of forty or sixty drops of pure glycerine into the lower bowel. In each case energetic peristaltic action

of the alimentary canal is induced, and the bowel is thoroughly emptied of its contents. Of these applications the action of the glycerine is very rapid, and in a few minutes the effect of the injection is seen. The soap suppository acts more slowly.

Injections of soap and water, or other liquid, have an entirely mechanical action in relieving the patient. To be effectual such injections must be large, consisting of at least half a pint of fluid, and should be thrown very slowly into the bowel. Still, although of service when given only occasionally, the frequent use of large injections is not to be recommended; indeed, this method of treatment is distinctly hurtful in cases where the costiveness has become a habit. Even in young babies great dilatation of the bowel and serious weakening of its muscular coat have often followed the daily use of the enema pump.

For the permanent cure of habitual constipation remedies given by the mouth are greatly to be preferred, but, at the same time, strongly-acting purgatives are worse than useless. Our aim should be to find the smallest dose that will awaken a normal degree of energy of peristaltic action, and to give this dose regularly, so as to induce a habit of daily evacuation. The daily dose is most efficacious when combined with a remedy which tends to give tone to the muscular coat of the bowel. For this purpose a useful draught is composed of half a drop of tincture of nux vomica combined with ten drops of tincture of belladonna and twenty of infusion of senna, made up to a fluid drachm with infusion of calumba. This draught should be given at first three times a day before food, but soon two doses in the day will be sufficient, and it is rarely long before one dose given at bedtime has a sufficiently laxative effect. Our object is not to excite watery evacuations, but to induce as faithful an imitation as possible of a normal action of the bowels. The liquid extract of cascara is useful in many cases, especially if combined with tincture of belladonna. Twenty, thirty, or more drops of cascara extract, with ten of the belladonna tincture, may be given with a few drops of glycerine in a little water every night. In the west of England a remedy held in high esteem consists of half a grain of sulphur colored red with cochineal. That this apparently insignificant dose is oftentimes efficacious when given regularly every night, I can testify from my own experience.

In cases where the motions are drier than natural, as if

from imperfect secretion of the intestinal glands, the addition of liquid to the diet, already recommended, may be supplemented by the administration of some saline aperient two or three times a day. This treatment is made more effectual when the saline is combined with small doses of nux vomica and quinine. For a baby of six months old five to ten grains of sulphate of soda may be given with one quarter of a grain of quinine, half a drop of tincture of nux vomica, and a minim of aromatic sulphuric acid in a teaspoonful of water three times a day before food. As in all cases where the remedy prescribed has been chosen with judgment and given in appropriate quantity, the continued administration of this draught, so far from rendering the bowel dependent upon the medicine, stimulates it to act spontaneously, so that the dose has soon to be given less frequently, and in no long time can be discontinued altogether.

By means such as the above the most obstinate case of constipation in an infant can be cured with little difficulty, but to be successful the treatment must not be restricted to mere drug-giving. The food of the child must be regulated with care, his clothing must be inquired into, and his general management passed under review. Where this is done, drugs given in comparatively small doses will act with sufficient energy, and will soon restore their normal regularity to the bowels.—*British Medical Journal.*

Microscopy.

If the condensed breath collected on the cool window-panes of a room where a number of persons have been assembled be burned, a smell as of singed hair will show the presence of organic matter; and if the condensed breath be allowed to remain on the windows for a few days, it will be found, on examination by a microscope, that is alive with animalcules. The inhalation of air containing such putrescent matter causes untold complaints, which might be avoided by a circulation of fresh air.—*Pacific Record.*

Nobert's Bands.—A correspondent asks, "What are Nobert's bands, so frequently spoken of in the older works on microscopy?" Prior to a comparatively recent period, the only means of testing the amplifying powers of microscopes of the finer grades was by trying them upon the

scales of certain butterfly wings, or the flinty skeletons of diatoms, the regular marking of which afforded an excellent method of testing objects (and, of course, the combination of objective and eye-pieces generally understood by the word microscope). Nobert, a Frenchman, devised an instrument for ruling with a diamond point a series of very fine lines upon glass. These lines commenced with say 100 or 1,000 to a given fraction of a meter, and were in series of ten, each series growing smaller in regular progression up to a certain number. Later on he made the number of lines to a given distance an unknown quantity, which was to be determined by the microscopist, this action being taken on account of the very important part played by imagination, or rather by a knowledge of the number which caused the observer knowing the real number to imagine that he saw and was able to count the lines. The following is a summary of the Nobert plates as known to the writer: Ten band plates, running from 11,259 to the inch up to 50,667, with no regularity between the series. Thus, for instance, No. 1 is 11,259 lines, No. 2, 13,100, No. 3, 15,300, etc. The thirteen-band plate runs from 45,000 up to 112,595 to the inch; the fifteen-band plate from 11,259 up to 56,297; the nineteen band (the one most often quoted) runs from 11,259 up to 112,595 (the same initial and final as the thirteen band). The twenty-band plate runs from the initial 11,259 up to 123,854. This is estimating the Paris line at 0.0888137833 inch. Nobert's bands are scarcely used any more in this country, having been superseded by those of Fasoldt, of Albany, N. Y., Professor Rodgers, of Cambridge, Mass., and Rutherford's gratings. Fasoldt, who is is a chronometer maker, devised his own machine for ruling, and we are informed that it is no larger than an ordinary "100" cigar box. Rutherford's gratings are probably esteemed more abroad than they are in this country. All of the rulings, with the exception of those of Mr. Fasoldt, are accompanied by a "table of corrections," which enables the observer who uses them as micrometers to secure absolute correctness. So sure is Mr. Fasoldt of the correctness of his rulings (and so far as the writers knows, justly so) that he sends no table of corrections with his plates. The subject is a very interesting and fascinating one for microscopists, as well as a very important one, and I shall take pleasure in again recurring to it at an opportune time.—*Pacific Record.*

Gleanings.

THE PAQUELIN CAUTERY IN ACUTE EPIDIDYMITIS.—The use of the actual cautery in acute epididymitis was first suggested by Dr. W. S. Halsted. His method consists in lightly touching the surface of the skin overlying the affected organ with a white-hot cautery point. The operation requires only a few seconds, and if skillfully performed is but moderately painful. A dressing of iodoform ointment is then applied, and the patient instructed to wear a suspensory bandage. Instant relief from pain almost invariably follows the application of this treatment, and the patient, as a rule, is able to be up and walk about in comparative comfort.

I have treated forty-six cases by this method, and in only two instances have the patients been obliged to remain in bed after the first application, and in one of these the real cause of the enforced rest was a co-existing cystitis.

It may be added in this connection that marked relief from pain in gonorrhœal rheumatism may also be effected by a similar use of the cautery and iodoform ointment, and this combined with absolute rest has, in my experience, proved the most satisfactory method of managing this obstinate class of cases.

Another method of applying strong counter-irritation in acute epididymitis is by means of a sixty-grain solution of nitrate of silver applied to the surface of the scrotum. I have employed this in thirteen cases, often with marked success. It, however, has the disadvantage of frequently causing a slough of the epidermis, leaving often an extensive patch of superficial ulceration.—*Geo. E. Brewer, M.D., Jl. Cut. and Ven. Dis., July*, 1888.

MORPHIA IN PUERPERAL ECLAMPSIA.—G. Veit (Bonn) recommends the exclusive use of morphia (by subcutaneous injection) in the eclampsia of labor, and ascribes the hitherto inefficiency of the drug to the much too small doses in which it has been given. Beginning with half a grain, one should boldly increase in twenty-four hours up to a grain and a half or even three grains. The apparent success of this treatment, by which, during a series of years, Veit lost no cases of eclampsia, made him so confident that he announced in his lectures that no one should

ever allow a patient to die in eclampsia. But in the last year Veit lost two cases, and he therefore advises in severe cases to make use of hot baths (110° F.) with subsequent wrapping in blankets. Speedy delivery, so far as can be practiced without undue injury to soft parts, is always indicated.

The experience of Veit is interesting, and shows that the morphia treatment, to be successful, must be pursued heroically. It is a fair question, however, how far Veit's success was due to morphia and how far to the "speedy delivery" which he says is always indicated. Certainly, speedy delivery under anæthesia, with subsequent treatment directed to the skin and kidneys, is almost invariably successful; and it is difficult to see how morphia can save a case which does not respond to the above treatment.—*Boston Medical and Surgical Journal.*

Quiet Iritis.—Hutchinson, Jr., reports several cases of iritis in which the attack, sometimes leading to extensive adhesions and involving much deterioration of sight, was from the first unaccompanied by the typical features of inflammation. Iritis in certain cases does not reveal its presence by the characteristic frontal pain, and is practically unattended by congestion or photophobia. Sympathetic inflammation, congenital syphilis, and inherited arthritic tendency are probably the most frequent causes of quiet iritis. This form is very rare in the iritis of acquired syphilis, that of the ordinary rheumatic type, and in traumatic or herpetic iritis. Sex and age have little or no influence in modifying the severity of the symptoms accompanying iritis. A constitutional tendency can not always be invoked as the reason for iritis taking on an insidious form, as shown by the occasional occurrence of two attacks in the same patient, one being accompanied by violent inflammatory symptoms, the other being perfectly quiet throughout. The absence of the ordinary symptoms of iritis by no means always implies a mild course of the disease.—*N. Y. Medical Journal.*

Treatment of Chronic Diarrhœa.—Debove, in a recent communication to the Medical Society of the Hospitals, claims great success in the treatment of chronic diarrhœa, especially of the tuberculous form, generally so little amenable to therapeutic agents, by silicate of magnesia. This remedy he administers in massive doses, half an ounce to an

ounce and a half a day suspended in a quart of milk. As a result of this treatment the diarrhœa disappears completely, and gives place to an obstinate constipation. The silicate of magnesia is known under the name of *talc* or *steatite*. The powder of talc is insoluble, inert, and has not heretofore been supposed to have any medicinal properties whatever. According to Debove, it has sedative properties on the digestive tube similar to those of bismuth, than which it is safer—it promotes the healing of intestinal ulcerations, but seems only to be efficacious by its presence in massive quantities. This substance, Debove says, is readily and rapidly eliminated from the intestines.—*Boston Medical and Surgical Journal.*

Bichloride of Mercury in Treatment of External Diseases of the Eye.—Alt (*Amer. Jour of Ophth*, Nov. 1887.) considers that sublimate solutions are very valuable aids in ophthalmic therapeutics. The strength in which he uses the drug varies from one part in 2,500 to one part in 5,000. The first solution sometimes causes severe pain, and must then be diluted. In all cases the solution is to be *poured* into the eyes while the patients are recumbent. In simple conjunctivitis with hardly any discharge, but with heat and dryness of the lids, instillations of sublimate solutions morning and evening act very well. In acute catarrhal conjunctivitis it is not so satisfactory, but in chronic catarrhal conjunctivitis it is very agreeable to the patients. In phlyctenular conjunctivitis it has a bad effect. In all forms of purulent conjuctivitis the frequent irrigation of the conjunctival sac with a solution of 1 to 2,500 is extremely efficacious, and Alt has obtained the same excellent result in diphtheria of the conjunctiva. In trachoma the remedy is of great help, as well as in blepharitis ciliaris. Ulcers of the cornea all do better when freely irrigated with the sublimate solutions.—*N. Y. Medical Journal.*

Liability of Druggists for Clerks' Mistakes.—The Supreme Court of Ohio has recently reiterated the general rule of the liability of druggists for negligence in putting up medicines. In this case the druggist clerk, when asked for "oil of sweet almonds," carelessly gave the "oil of bitter almonds," and the plaintiff's wife died almost immediately after taking the poison. There was nothing on the bottle to indicate that it was a virulent poison, and it was clear in

the evidence that there was gross negligence on the part of the clerk. The druggist denied his personal liability for his clerk's mistake, but at the trial the court decided against him, and the Supreme Court affirmed the decision. This ruling is fully in accord with that of the courts of other States, and probably no tribunal would relieve a druggist under similar circumstances.—*Medical Times.*

Mammary Cancer in the Male.—Two cases of cancer of the breast in the male subject are recorded in a recent number of the *Archiv für klinische Chirurgie*, one observed by Dr. Berns, of Amsterdam, and the other by Dr. Franke, of Brunswick. The history of the latter is furnished by Dr. Schuchardt, of Gotha, and abstracts of the two histories are given in the *Centralblatt für Chirurgie*. Berns' case was that of a man, forty-two years old, whose breasts had attained to very great size in his youth, and had quite the character of a woman's at the time of the observation. The tumor, an alveolar carcinoma, was situated on the outer aspect of the right breast. It was removed, but returned, and, after a second operation, proved fatal by dissemination, but without involvement of the axillary glands. In Franke's case the patient was sixty-nine years old, and the tumor, which was seated in the breast, was as large as a walnut.—*N. Y. Medical Journal.*

The Microbe of Tetanus.—The bacillary origin of tetanus is rapidly being placed on a sound basis. In some recent experiments with a certain bacillus which is credited with this pathogenic power, forty-five guinea-pigs, seventeen rabbits, two lambs and one sheep were inoculated with a cultivation, with the result that twenty-seven of the animals died of well-marked tetanus, twelve suffered from tetanic symptoms, from which they recovered, and ten died from acute systemic infection without tetanic manifestations. Although the investigation bore on the pathology of idiopathic tetanus, it is highly probable that traumatic tetanus is due to the same cause.—*Medical Press and Circular.*

Investigations on the Means of Diffusion of the Tubercle Bacillus. — Cornet (*Münchener Medicinische Wochenschrift*, 308) has experimented with the dust obtained from the walls and floors of various dwellings in which tuberculous patients had been; inoculating guinea-pigs with it, and carefully excluding all possibility of infection from out-

side sources. In this way twenty-one rooms of seven Berlin hospitals were examined, and bacilli found to have been present in the dust from most of them. Positive results were also obtained with the dust from insane asylums and penitentiaries. The dwellings of fifty-three tubercular patients were investigated in the same way, and the dust in the neighborhood of twenty patients found to be virulent. It was the case with absolute regularity that the dust was always virulent when the patient had been in the habit of spitting on the floor or in a handkerchief; while it was never so when a spit-cup had been employed.

The author further found that smearing of tubercular material over quite small wounds was sufficient to produce the disease. He tried the effect, too, of the different medicines recommended for the treatment of tuberculosis, but was unable to check or prevent the disease in the guinea-pigs which had been inoculated; even the sending a half dozen of them to Davos was without effect.—*American Jour. Med. Science.*

NEW STAIN FOR TUBERCLE BACILLI.—The London *Lancet* gives Prof. Lubimoff the credit of introducing a new stain, borofuchsin, for distinguishing the *B. tuberculosis* from all other bacilli in sputum or tissue, which by this method remain colorless:

℞.	Fuchsin, ...	8 grains.
	Boric acid, . . .	8 "
	Alcohol, absolute, . .	3¾ drachms.
	Distilled water, . .	5 "

Spread the sputum on the cover-glass and heat in contact with the borofuchsin for one or two minutes. Wash in alcohol, and immerse in saturated alcoholic solution of methylene blue for half a minute. Wash again in distilled water, dry and examine in cedar oil or Canada balsam.—*Microscope.*

ANOMALIES IN MEDICAL LIFE.—The following pithy little paragraph is extracted from the editorial columns of *Gaillard's Medical Journal*, and bears the title, "A Strange Anomaly:" "The physician is the only man whose life-duty calls upon him to work directly against his own interests. He must study and work to bring about a state of affairs which tends directly to relieve him of his occupation. Every year the physician realizes that it is more scientific to keep a community healthy than to cure it of such ills as it

is obliged to suffer from when no regard has been paid to sanitation. As he advances in science he places himself more and more in the position of a merchant who is using every effort to make his wares useless. Fortunately, there is not much prospect of his being entirely successful in this endeavor at present, but it is easy to see that the medicine of the future will be progressively preventive." There are contrarieties in every walk of human life, but a stranger one than that above described it will be difficult to find. The inevitable tendency of the vast volume of sanitary work, done early and late, by every modern-minded physician, is the abridgment of his field of labor and his livlihood, because it manifestly reduces sickness and the the medical demands of the community. The more conscientious and thorough a man is in the discharge of the sanitary phase of his self-appointed duty, the more absolutely does he come in conflict with the material interests of his brethren and himself. Carried to its legitimate conclusion, we behold the singular spectacle of a body of specially trained men seeking, by its own unselfish exertions, to wipe itself out of existence. But let us not cross the bridge untimely; it will not come in our day. We are minded to give a brief illustration of the above, taken from the medical history of Queens County. It is told of old Dr. Isaac Ledyard, a notable character who flourished in Newtown a century or so ago, when there was a frequent passing of the social cup and much drinking of toasts; it is told of him that when a sentiment or toast would be demanded of him, it was his wont to lift his glass and pledge the company in this guise: "Here, my friends, is to your very good health, and that is most consumedly against me." If the good old Doctor had survived until the days when sanitary science was discovered, he would have been found acting in like manner as he phrased his toasts—at odds with his material interests.—*Brooklyn Med. Journal.*

The Treatment of Migrainous Headache.—Dr. James Little, before the Royal Academy of Medicine, read a paper on migrainous headache. He said he was in the habit of directing the patient, when he awoke with any feeling of headache, to take twenty grains of the salicylate of sodium in a wineglassful of water, made effervescent by the addition of a dessertspoonful of the granular citrate of caffeine, and, if necessary, to take a second or even a third dose at intervals of two hours. The effervescing caffeine made the dose a

very palatable one, which the salicylate alone was not, and probably rendered it more useful; but that the good effect was not due to the caffeine was proved by the fact that the author had seen it relieve persons who had previously used the caffeine alone without benefit. It did not appear to lose its effect, as a patient, to whom Dr. Little gave it more than two years ago, said she found it as valuable as when she first began its use.—*British Med. Journal.*

Iodoform for Hœmoptysis.—Chauvin and Jorisenne (*Le Prog. Méd.*, No. 20, 1888.) recommend iodoform in pulmonary hemorrhage. These are two formulæ:

Iodoform,	gr. ¾
Extract of gentian,	q. s. to make one pill.

S. Three to five pills in twenty-four hours.

Iodoform,	gr. ¾
Tannic acid,	gr. iss.
Extract of gentian,	q. s. to make one pill.

S. Three to five pills in twenty-four hours.

The Treatment of Gall-stone Colic.—Mr. Jonathan Hutchinson recommends (*British Medical Journal*, June 30, 1888.) the use of anæsthetics to full insensibility, kept up for a long time, both preceded and followed by opiates, as the best treatment for all forms of gall-stone colic. It does not matter whether the stone is impacted in the common duct or in the bowel; we can scarcely do better than prevent spasm and favor relaxation of the parts concerned. By these measures he has, in several cases in which he has been called in with a view to operation, succeeded in quite removing symptoms which were very urgent.

Infertility in the Male.—Infertility in males may be due either to azoöspermia (absence of spermatozoa) or aspermia (absence of emission). The product of emission consists, as is well known, of a mixture of three secretions, from the testicles, the seminal vesicles and the prostatic glands. Dr. Fuerbringer has remarked that the testicles only produce motionless spermatozoa, which become animated on admixture with the prostatic secretion, the importance of which, as a factor in sexual impotence, has been generally overlooked. According to some recent observations, the prostatic glands secrete a milky, but non-viscid liquid, holding in emulsion a number of globular bodies, half the

size of red blood-corpuscles, and composed of lecithin. It is this secretion that gives the characteristic odor to the seminal emission, the other constituents being devoid of smell. The stimulating effect of the prostatic secretion is only exercised on viable spermatozoa, and it has no influence on those which for one reason or another are "dead." In several cases of young men whose semen contained these motionless spermatozoa, the latter became active enough on the addition of some prostatic secretion, the defect being thus evidently due to a want of it. Azoöspermia proper is very rare, and when present is due either to atrophy of the secreting organs or occlusion of the vas deferens consequent on double epididymitis or gonorrhœal funiculitis. This affection no treatment can relieve, but aspermia, depending as it often does on stricture of the urethra, may be cured by removal of the stricture.—*Medical Press.*

Favus of the Forearm.—The following case is deemed interesting chiefly on account of its very unusual location:

Occurring upon the scalp, tinea favosa is a somewhat rare disease, and extending from the scalp to the non-hairy skin of the same individual is a still more rare occurrence, but to develop exclusively on the non-hairy skin is a circumstance not very often met with.

M. L., seven years old, of Jewish parents, and otherwise healthy, presented herself for treatment April 7. Examination revealed a roundish patch of eruption about three-quarters of an inch in diameter on the flexor surface of the forearm about the region of the junction of the middle and lower thirds. Exactly in the center of the patch was a bright yellow, sulphur colored, umbilicated crust one-quarter of an inch in diameter, with a crack across its center, showing its brittle character. By careful examination three or four beautifully defined smaller cups about the size of the head of a pin could be observed here and there over the patch, otherwise the remainder of the patch was, to all appearances, identically that of ordinary ringworm, with a reddish, slightly elevated abrupt margin, with a center tending to become paler, and covered slightly with fine scales. Examination with the microscope shows the crust to be composed entirely of favus spores; scales from the reddish margin contained principally mycelia with a few smaller spores, which, as far as I was capable of judging, were identical with those found in ringworm.

THE poisonous properties of expired air are well known, but the nature of the substance or substances which impart to it this toxicity have been but slightly studied. Dr. Angus Smith, in the course of his famous researches on air, rain and water, showed, that contrary to the ordinarily received opinion, carbonic acid is, even when present in minute quantity, a weak but decided toxic agent capable of producing very deleterious effects, especially when continuously inhaled. Other investigators, prominent among whom are Nowak, Seegen and Hammond, showed that carbonic acid was not the immediate cause of the toxic effects seen upon the repeated inhalation of expired air, but that the real poisonous principle was organic in its nature. This organic matter has been recently studied by Brown-Sequard and by R. Wurtz. The former has found that when the condensed vapors emanating from human or animal lungs were injected into animals, death was the almost immediate consequence. The same effect was obtained when the condensed liquid had been previously boiled, thus showing that the toxicity was not due to a germ but to a definite chemical poison.

Independently of Brown-Sequard, but about the same time, Wurtz attempted the isolation of this volatile poison by chemical means. By passing expired air through oxalic acid, he succeeded in demonstrating the presence of ammonia and of a volatile organicbase, alkaloidal in nature. It yielded crystallizable salts with acids as well as double salts with the ordinary alkaloidal reagents. This peculiar substance belongs, therefore, to the large class of physiological alkaloids or leucomaines as they have been named by Gautier. Brown-Sequard is of the opinion that the continual inhalation of this poison, so lowers the vitality as to give rise in time to pulmonary phthisis.—*Comptes Rendus.*

BROMIDES OF SODIUM AND POTASSIUM.—Experience shows us that large and continual doses of the bromide or iodide of potassium engender uncomfortable symptoms, which have been attributed by some to the basic element in the drug. The continued use of the iodide of potassium causes loss of appetite, nausea and emaciation, while the bromide of potassium, administered for a considerable length of time, occasions pain in the epigastric region. If we could find a better vehicle than the potassium for the acid element, we should have less annoying sequelæ. The salts of sodium

are occasionally substituted with advantage. It has been urged that from the different combining weights of potassium and sodium we gain a marked advantage from the use of the latter, which is only 22.99, as compared with 39.04 for potassium. The combining weights of iodine and bromine being, respectively, 126.23 and 79.75, it is evident that 10 grains of bromide of potassium contain 6.72 grains of bromine, while 10 grains of bromide of sodium contain 7.76 grains of bromine, making 8.6 grains of bromide of sodium equal to 10 grains of bromide of potassium. Of the iodide of potassium, 10 grains equal 9 of the iodide of sodium, so far as the relative proportions of iodine are concerned. At the present time we are accustomed to interchange these doses, but it should be remembered that in giving the sodium salt, we are giving a less quantity of the prescribed vehicle, as well as a more wholesome drug. The salts of sodium, at the present time, are, it is true, more expensive than those of potassium, but this may be explained on the ground of a slow demand, as sodium is properly a cheaper substance than potassium, and the increased use of the salts of sodium would doubtless lower their cost even beneath that of their substitutes.—*Medical Register.*

Sulphonal.—The drug has been given medicinally, by Kast, to sixty patients, and three hundred observations of its effects were made, the results being that almost without exception the patients passed into a tranquil sleep, lasting from five to eight hours, and awoke feeling perfectly comfortable. No disturbance of digestion, pulse or temperature was noticed, and no want of co-ordination in the limbs, which was so evident in the case of dogs, appeared after the administration of this substance to men. The ordinary dose given was about one-half drachm, although in women fifteen grains, or in man forty-five, may produce the characteristic effect. It has been found to be most conveniently administered in the form of a powder inclosed in a wafer.

The testimony as to the value of this new hypnotic is as yet scarcely completed enough to establish its position. The indications are that we will have in this substance a remedy which will be quite as valuable as amylene hydrate, since it has been given even in cases of cardiac valvular disease without disagreeable effect, and is especially efficacious in cases of sleeplessness in nervous subjects.—*Therapeutic Gazette.*

Cocaine in Acute Tonsillitis.—Recently I began to suffer from a very sharp attack of acute tonsillitis of the right side, with a considerable injection of the surrounding parts. Two days after I experienced the most excruciating pain in swallowing, also severe pain in the right ear, and I could only with great difficulty speak. In the afternoon of this day my friend, Mr. Thomas, swabbed out my throat three or four times with a four-per cent. solution of cocaine, and poured a few drops of the same into my ear. The relief which I experienced was so great that I could soon after speak fairly easily, and swallow with very much less difficulty. I continued to apply the cocaine every two hours during the day with continued success for five days, then a day in the country put me right.—*British Medical Journal.*

Book Notices.

Second Annual Report of the State Board of Health of the State of Ohio, for the Year Ending October 31, 1887. Columbus: Printed by Myers Brothers. 8vo. Paper. Pp. 374. With an Appendix.

The gentlemen who compose the State Board of Health of Ohio are Drs. John D. Jones, of Cincinnati, President; Edward T. Nelson, Delaware; S. P. Wise, Millersburg; D. H. Beckwith, Cleveland; Thos. C. Hoover, Columbus; H. J. Sharp, London; W. H. Cretcher, Bellefontaine; Hon. D. K. Watson, Attorney-General (ex-officio). Each of these gentlemen is made a standing committee having charge of some department pertaining to the preservation of the general health; for instance, Dr. Jones constitutes the committee of Hygiene of Occupation and Railway Sanitation; Dr. A. P. Wise has charge of Epidemic and Endemic Diseases and Quarantine; Dr. T. C. Hoover, Especial Sources of Danger to Life and Health, etc.

The general report of the work says that an average condition of health existed during the year; that diptheria, which prevailed in many localities at the close of the previous report, decreased in prevalence during the succeeding winter, spring and summer months. Scarlet fever was, to a limited extent, present in some parts of the State during the year.

Measles, it seems, was the only disease to assume epidemic proportions during the year. In the months of December, January, February, March and April (1887) it swept in a broad wave over the State, affecting thousands of children. Over six thousand cases were reported to the Board during this time, and this represents but a small part of the total number of cases which occurred. The extent of the epidemic was doubtless due, in part, to the fact that measures for its prevention were seldom or never taken.

As mentioned by the report, very little care is used to prevent the spread of the disease; and, consequently, when some time has elapsed since a previous epidemic, the number of individuals who are not protected against an attack by having had it, having largely increased, when it occurs, a wide-spread epidemic necessarily happens. As a general rule the disease is but seldom fatal, and parents usually, as a rule, prefer that their children take it while young. When an epidemic, therefore, breaks out, instead of there being any isolation of those liable to take it, they are permitted, rather, to become exposed to it.

Measles is generally spoken of as a disease of children; but it is such only for the reason that the unprotected are found only among children. An adult is as liable to take it as a child if he has never had it. We have seen it mentioned in some medical work, that some island of the ocean, having a large population, escaped, at some period, an epidemic of measles for sixty years. At the end of that time, a case having been imported, an epidemic was set up in which adults and children alike became victims.

We can not help dissenting from the recommendation of the report that, in all cases of measles, the same precautions should be taken for its restriction as are thought necessary in cases of scarlet fever and diptheria. These latter affections are often very fatal; but not so as regards measles. It is very seldom fatal with children, and when deaths do occur they generally result from sequelæ, which oftentimes can be avoided by proper nursing and observance of hygienic conditions. But while the disease is but little fatal, its poison is a hundred times surer of producing its specific effect than is the case with the poisons of diptheria and scarlet fever. The consequence, therefore, of employing restrictions against the spread of measles would be that, having checked an epidemic of it for a long while, the persons liable to it would be greatly increased in number, especially of adults; then,

the poison of it gaining admission into the community, which would most surely occur in course of time, an epidemic would break out which would prostrate a large part of the population, destroying business, and not unlikely assuming a malignant character.

Quarantine, as a defense against cholera, says the report, has been abandoned by some of the highest sanitary authorities, and even its advocates must admit that it has often proved an ineffectual barrier. Undoubtedly, it continues, our greatest safety will be found in measures to secure, in all parts of the State, pure water, pure soil and pure atmosphere.

It is earnestly recommended that a contingent epidemic fund be placed at the disposal of the Board, to be used, subject to approval by the Governor, in preventing the entrance, or in limiting the spread, of this and other pestilential diseases in our State.

The Board very properly calls attention to the pollution of the streams and rivers throughout the State. They speak of it as a serious and rapidly increasing evil. As a matter of course, as the population of cities increases, the pollution of wells and the danger attending the use of such waters becomes correspondingly greater. Public waterworks must be built, and it is becoming more and more difficult to find streams and rivers which will furnish a supply of the requisite purity.

The efficiency of the Board is greatly restricted by want of funds. Under the circumstances it can do but little more than to endeavor to educate the people in matters of health; to bring to the minds of all, the immense gains in health and happiness to be had by the due observance of known sanitary laws. It should have intrusted to it the power of enforcing such statutory laws as will compel the unwilling to respect the rights of their neighbors.

In the way of educating the people by disseminating sanitary knowledge, the Board has distributed many circulars relating to the prevention and restricting of contagious diseases. These have been translated into the German language. Preceding the hot weather, a circular on the Care and Management of Infants and Young Children was prepared, and five thousand copies printed.

The Board of Health has undoubtedly been doing all it possibly can do to improve the sanitary condition of the people of the State of Ohio. Restricted greatly by want of

funds, and therefore able to do but little in the way of enforcing sanitary laws, it has employed every effort to educate and enlighten the people by disseminating knowledge in regard to preventing diseases. It should have the good wishes and encouragement of all good citizens.

ATLAS OF VENEREAL AND SKIN DISEASES. Comprising Original Contributions and Selections from the Works of Prof. M. Kaposi, of Vienna; Dr. J. Hutchinson, of London; Prof. I. Neumann, of Vienna; Profs. A. Fournier and A. Hardy, and Drs. Ricord, Cullerier, Besuier and Vidal, of Paris; Dr. T. A. Morrow, of New York; Dr. E. L. Keyes, of New York; Dr. Fessenden Otis, of New York; Dr. J. Nevins Hyde, of Chicago; Dr. Henry G. Piffard, of New York, and others. Edited by Prince A. Morrow, A.M., M.D., Clinical Professor of Venereal Diseases, formerly Clinical Lecturer on Dermatology in the University of the City of New York, Surgeon to Charity Hospital, etc. New York: William Wood & Co.

The size of the pages of this Atlas, on which the colored plates are pictured, is seventeen and one-half inches in length and thirteen and one-half inches in breadth.

In publishing this work, it has been the object of the editor and publishers to represent all of the various venereal and skin diseases by colored plates as precisely as they appear on the human subject and as the skill of the artist, assisted by all the means of modern art, can render them. According to our judgment, from an examination of the plates of the several fasciculi we have received, there could not be made copies of the various venereal and skin diseases truer to nature.

But that the publishers may feel that we do justice to the work, we will copy from their prospectus: "It is with special satisfaction the publishers announce that this large work and important work is now ready for publication. It has long been recognized by them, from wide observation and acquaintance with similar works published in this country and abroad, that it is impossible for any one author to furnish, from his own collection of cases and illustrations, the most typical and at the same time the best and most life-like pictures of the many peculiarities of these diseases. Appreciating the defects and disadvantages arising from

this cause, it was determined from the outset to enlist the coöperation, in making of this Atlas, of the leading dermatologists and syphilographers of the world. Prominent among them are Profs. M. Kaposi and I. Neumann, of Vienna. The atlas of the former, of venereal diseases, just completed, and that of the latter, of skin diseases, now being issued in parts, will be largely drawn upon in the preparation of this work, the sole right to use them having been granted us by the authors.

"The editor of the work is Dr. Prince A. Morrow, of New York, who, in addition to the plates contributed from his own remarkable collection, will write the treatise on skin and venereal diseases which constitutes, beside the description of the plates, the text accompanying them. In this treatise it is aimed to include chiefly those features which are the most practical, omitting, in great measure, pathological and other considerations which would be more properly treated of in extended writings, rather than as the adjunct to an atlas.

"In regard to the character of the plates, it may be said, they are believed to be superior to anything of the kind heretofore produced—as accurate in drawing as photographs and far more distinct, while the coloring faithfully represents nature. The text is printed from new type, large, clear and handsome, and the paper is heavy, with a highly finished surface."

This atlas will be sold by subscription only. It will be published in fifteen monthly parts, each part containing five folio chromo-lithographic plates, many of them containing numerous figures, all printed in flesh tints and colors, together with descriptive text for each plate, and from sixteen to twenty pages of a practical treatise upon venereal and skin diseases, the whole forming, when complete, one magnificent, thick folio volume with seventy-five plates, containing several hundred figures, printed in colors.

Transactions of the Medical Association of the State of Missouri, at its Thirty-first Annual Session, Held at Kansas City, Mo., April 17, 1888. 8vo. Pp. 462. Paper.

The work before us is fully up to the standard, in merit, of the Transactions of other State Medical Societies. Besides a detail of the business transactions of the Society, the vol-

ume contains the papers which were read by members, of which there are forty-nine. While all the papers are generally good, a number are of very considerable interest and value. The following are the titles of some of the papers: The Nervous System in Disease—a Preliminary and Fragmentary Contribution to the Study of General Neural Pathology, C. H. Hughes, M.D., of St, Louis; Disease of the Lymphatic System as a Cause of Anemia, by O. B. Campbell, M.D.; The Untoward Effects of Drugs, with their Painful Surprises, by Robert F. Brooks, M.D.; Colotomy, by N. B. Carson, M.D.; Radical Cure of Hernia, by J. W. Heddins, M.D.; A Case of Indigenous Leprosy, by A. H. Ohmann-Dumesnil, M.D.; Paramyoclonus Multiplex, by Frank H. Fry, M.D.; Pneumonia-Malaria the Probable Cause of the Large Mortality, by W. B. Lucas, M.D.

Dr. O. A. Williams, formerly we believe of Cincinnati, and a brother of Dr. E. Williams, exhibited a pathological specimen consisting of recently delivered fœtal monstrosities. Dr. H. C. Dalton, of St. Louis, read such an interesting paper that a resolution was concurred in to instruct the Committee on Publication to publish wood-cuts illustrating the paper. The title of the paper was, "A Case of Gunshot Wound of the Stomach and Liver—Laparotomy—Recovery."

The President in his address brought forward two subjects of interest, which concern the profession greatly. One of them is of especial interest at this time, when we have an epidemic of yellow fever prevailing in the southern portion of the country; namely, Quarantine. He spoke as follows in regard to it: "I would ask your active coöperation in an organized effort to obtain such national legislation as will effectually protect the public health, not only from the importation of infectious and contagious diseases during the time that they are epidemic in countries with which we are in communication, but also from the incessant conveyance into the Interior of contagious diseases by immigration. You are well aware that an effort is being made to establish a national quarantine, and I would urge upon you to pass suitable resolutions indorsing legislation having it in view, and to forward them to the representatives of this State in the national council."

We think that every medical society throughout the country—state, county and city societies—should, at this time, employ every effort to have our national congress and

the state legislatures to take such action as will be efficient in preventing the spread of contagious diseases. Many valuable lives would be saved if stringent quarantine laws were passed and enforced. All of the States should have Boards of Health with powers to legislate upon sanitary subjects, and supplied with means to enforce their laws. It has been proven almost to a certainty that all contagious and infectious diseases are propagated by living "germs;" and that these "germs" are brought into existence and are multiplied by the waste products—commonly termed filth and dirt—which are found in and around the habitations of human beings. By the destruction of these products disease germs can find no lodgment to multiply and gain strength for their pestilential work, and must, consequently, soon disappear. But it is a melancholy fact that very many people will not keep clean unless compelled; and the only method to bring to bear the power necessary for it is through Boards of Health properly equipped.

As regards the practice of medicine in Missouri, the President said: "A Board of Examiners, by whom all who, by proper study, as evidenced by their credentials of learning, claim to have possessed themselves of the necessary qualifications, should pass satisfactory examinations in the so-called fundamental branches of medicine, would, I believe, solve the problem of the practice act."

Editorial.

COMMISSIO DE LUNATICO INQUIRENDO.—Dr. Frank J. Lutz, of St. Louis, was President of the last meeting of the Missouri State Medical Society, which met at Kansas City. In his address he spoke of the manner in which the law deals with those committing criminal acts, and for whom it is pleaded that they should not be held responsible because of their mental condition.

His recommendation, as regards the character of a law which should be passed to govern in such cases, is very good indeed. Such an enactment as he advises should be made a law in every State.

His remarks were as follows: "The time has arrived when the law should be made to conform to the well-established and well-founded knowledge of medicine, in order that

justice might be properly administered. When mental defect or alienation is set up as a plea, the question becomes primarily one of medicine, and physicians only are competent judges. The law should not permit anyone else to pass upon a question concerning which none but physicians can have an adequate knowledge. I am sure the legal profession of this State would indorse changes in our laws, whereby a commission would be established, whose duty it would be to determine the mental status of anyone accused of a criminal act, in whose defense mental aberration was set up."

Of course, in cases of legal trials in which insanity is alleged, medical experts are called upon as witnesses; but doctors disagree sometimes, and, when contradictory evidence is submitted to a jury composed of unlearned men—that is unlearned in the physiology and pathology of the mind—it is a very unqualified body to analyze the testimony and render a verdict that will set forth the facts. It might be alleged that, in such instances, the testimony of either side would as likely disclose the facts as the other; that in all but undoubted cases of insanity the question of the actual existence of mental aberration is but guess-work, and, consequently, a jury of doctors would be as likely to disagree as the medical witnesses. We do not doubt that such would be the result if the physicians called upon to set upon a jury to pass a verdict upon the sanity of an individual were selected without reference to their qualifications. But, when Dr. Lutz advised a jury of medical men, we presume he meant that only such men should be selected as are known to be competent—such as had given especial attention to mental diseases—such as had been physicians to institutions for the insane. Those who are versed in a department of knowledge are not apt to materially disagree in regard to any subject pertaining to it, if each one has full opportunity to become conversant with all the facts.

About five years ago, an Irishman in Cincinnati killed his wife under circumstances that impressed many that he was insane. He had one trial, in which the jury disagreed. When he came to be tried a second time, there was impannelled a jury of which nearly every member was a man of wealth, and regarded as of more than ordinary intelligence. One of them was an editor and one of the proprietors of a leading newspaper of this country, and also a member of the Presbyterian Church; another had great wealth and was

a ruling elder in a fashionable and wealthy Presbyterian Church; still another had wealth to the amount of several millions of dollars and was also a member of the Presbyterian Church. Similarly we could describe the other members of the jury; though all were not Presbyterians. It was regarded as the *finest* jury and embodying the greatest amount of intelligence of any jury ever impannelled in the county. But not a man knew anything about insanity. All of them were of the highest integrity and of a character very little disposed to show any leniency toward wrong-doing of any kind. When we looked upon the jury at the beginning of the trial we regarded the prisoner as a doomed man. We judged rightly. Although there was strong expert evidence that the accused was insane, yet the jury was out but a few minutes when they returned with a verdict of guilty.

Though all the members of this jury were men of intelligence, yet they were of a character who regarded pleas of insanity as inventions and tricks of lawyers to enable bad men to escape from the punishments they righteously merited. With them, moral insanity was but a synonym of moral depravity.

That moral insanity results from disease, there can be no more doubt in this day of enlightenment than that intellectual insanity proceeds from the same cause. If the jury of which we have made mention had given any attention to diseases of the mind, they would have given some weight to the testimony that the laborer who was on trial for his life was insane; but, with their prejudices and ignorance of the subject of insanity, they would not have cleared him of the charge of a most wicked and diabolical crime unless he had been proven to be so intellectually insane as to be incoherent.

That justice may prevail when a party, charged with a criminal act, is put upon trial and it is alleged he is insane, he should be tried first by a commission of medical men, appointed by the Governor, as regards his mental soundness. The medical men composing the commission should be persons of acknowledged qualifications and ability—learned experts in diseases of the mind. Under such circumstances, the really criminal will not escape the punishment due him, while the unfortunately insane will not be branded as a murderer or criminal.

THE YELLOW FEVER AT JACKSONVILLE, FLORIDA.—Our readers are aware of the outbreak of yellow fever a few weeks ago at Jacksonville, Florida. It was thought at first that it would soon be stamped out, but Yellow Jack is not easily throttled and so the disease has continued and is becoming worse every day. From all accounts the distress is very great. All business has stopped, and those who depended on earnings to live have been reduced to great poverty and have great difficulty in procuring the necessaries of life. Hundreds have fled from the city and hundreds more would be glad to get away, but can not. For some time the railroads refused transportation to persons desiring to escape from the infected city, but we believe now the way for flight has been opened under certain conditions.

On September 3d, thirty-seven new cases were reported for the day; but it was charged that a number of physicians were not making reports to the Board of Health, asserting that the posting of yellow flags at patients' gates and publishing the fact that they have yellow fever have an injurious effect in frightening them. A silly statement is made that physicians tell patients that they only have a little bilious attack, but treat them for yellow fever—stating that the disease frightens more to death than it kills. It is believed that the total number of cases of fever not reported is large, which, no doubt, is true; for there are many reasons for concealing the actual number attacked by the disease.

It is stated that the Board of Health are indignant at the neglect of physicians to comply with the law. But we imagine that the indignation is more apparent than real. Some say that the failure to stamp out the disease in its incipiency was due to the neglect of the doctors to report the first suspicious cases promptly to the Board of Health; but we do not believe it.

It does not seem that the disease, up to the present time, has been very fatal, unless the real mortality has been concealed. Up to September 3d, two hundred and ninety-five cases had been reported; the total number of deaths to that time were thirty-six.

On September 3d a conference was held in Augusta, Ga., between Surgeon-General Hamilton and Governor Gordon, of Georgia. There were present, besides Mayor May, Chairman Young, of the Health Committee of the City Council, and City Attorney Davidson, all of Augusta;

Mayor Lester and Dr. W. F. Brunner, Health Officer of Savannah; Mayor Dunn, of Brunswick; Dr. Jerome Cochran, State Health Officer of Alabama, and Dr. James E. Reeves, ex-President of the American Health Association, and now special Commissioner appointed by the State Board of Health of Tennessee. The object of the conference was to consider the situation in Jacksonville, and the expediency of allowing the people of Jacksonville to go to other places, and under what restrictions. After a general discussion and free expression of opinions by the gentlemen present, a number of resolutions were adopted by the conference, some of which we copy:

Resolved, That the wholesale removal of persons from infected districts to populous cities and aggregation of individuals from infected places in any city in this country is regarded as extremely hazardous to such community.

Resolved, That the citizens of Jacksonville have no just cause for complaint against the quarantine regulations as at present operated, inasmuch as abundant provision has been and will be made by establishing healthful and cleanly camps for the inhabitants of Jacksonville, and provision made for the maintenance of such citizens during detention in camp.

Resolved, That, in the judgment of this conference, after suspects have been detained in quarantine camp ten days, and their baggage fumigated, under the direction of the United States Government, such persons should be permitted to go to any community willing to receive them.

After the conference adjourned, Surgeon-General Hamilton left for Camp Perry, St. Mary's, Florida. A public meeting was held on September 3, at Chattanooga, Tenn., which was attended by a large number of people to take action looking to enforcing a rigid quarantine against Atlanta because she has opened her doors to the yellow fever refugees from Florida. A resoulution was adopted urging the Board of Health to order a quarantine against Atlanta and cities and towns where refugees have been invited or allowed to congregate.

Mississippi Valley Medical Association.—This Association will meet in Pickwick Theatre, Jefferson and Washington Avenues, in St. Louis, September 25, 26 and 27, 1888, two weeks later than first announced.

This date was selected in order that the cheap railway rates during the carnival season of St. Louis might be made available.

The programme is perfected, and the entire time of the meetings from 9:30 A. M. to 5:30 P. M., each day, will be taken up with strong papers and full and free discussions, there being nothing in the way of extraordinary or irrelevant

business, all such matters being settled by committees, without discussion. The three evenings will be consumed by public and private entertainments, and each and every delegate may be assured that constant efforts will be made in the direction of catering to his comfort and enjoyment.

The sentiment animating the Committee of Arrangements and officers of the Association in planning this meeting, has been to provide for good, solid scientific work while the sun shines, and at night let recreative effort and pleasure reign.

All physicians west of the Allegheny Mountains are invited to become members, eligible to membership under the following from the Constitution:

Art. III. Membership in this Association shall be limited to those members of the profession of medicine who acknowledge allegiance to the American Medical Association by signing its code of ethics. No individual who shall be under sentence of expulsion, suspension or disability, from any recognized State, county, district or local medical society, shall be eligible to membership in this Association until said disability shall have been removed. All applications for membership shall be referred to the Committee on Credentials. The annual dues shall be three dollars, payable in advance.

Kindly inform us prior to September 24, whether or not you can attend. Be sure and secure receipt from local ticket agent for full fare paid.

For further information, address I. N. Love, M. D., Chairman of Committee of Arrangements, Lindell and Grand Avenues, St. Louis.

Hospital on the High Seas.—We see stated in the *Philadelphia News* what we had overlooked, namely, that a proposition has been made by the *Lancet* in favor of fitting out ships for the accommodation of phthisical patients and convalescents generally, with the object in view of supplying these cases with the purest of sea air. These vessels, it is recommended, will cruise within easy reach of such ports as will afford them fresh vegetables and water; and, according to the season, they will sail either in southern or northern waters. They will have a staff of efficient officers; and every appliance and means of treatment will be provided.

There are very many persons who, with ample means at their command, are suffering from lung-hunger and lung-thirst that might regain their lost health if they could, in

some manner, get access to the limitless supplies of fresh and pure ocean air, for the like of which they pant at home. It is claimed for the cruising ocean hospital that it will combine certain advantages which are sought to be obtained, but not always with success, by the construction of sanitariums at great elevations to provide phthisical and other invalids with an abacterial air; more especially will it enable a change of location at the bidding of the seasons; it will bring its inmates into contact with air that is salt—and tonic, on that account, to a large proportion of respiratory patients—and not unduly rarefied, and it will avoid some of those excessive fluctuations as to the humidity and temperature of the air that are experienced at some of our land health resorts.

Dr. Reynolds on Cocaine—Dr. Dudley S. Reynolds, the editor of *Progress*, an able medical journal published at Louisville, has the following to say in regard to cocaine:

"The medical profession has about settled its estimate of the therapeutical value of muriate of cocaine, but it is, unhappily, no easy matter to decide upon the most uniformly reliable source of supply. The editor of *Progress* had about concluded that Merck's was the only reliable product, when recently he was induced to make trial of that produced by Parke, Davis & Co. A fresh sample of ten grains was dissolved in five drachms of distilled water, to which was added one drop of liquid carbolic acid. One drop of this instilled into the eye of a man, from whose cornea a foreign body was to be removed, produced complete anæsthesia in three minutes, so that incision of the inflamed cornea and turning out of the piece of offending metal was not felt by the patient. Twenty other similar experiments yielded similar results."

The Southern Surgical and Gynecological Association.—The meeting of the Association will not be held in Birmingham on the 11th, 12th and 13th of September as announced, but has been postponed until the first Tuesday in December, owing to quarantine against yellow fever. Please signify whether you can attend the meeting in December, and oblige, Yours truly,

W. E. B. Davis, M.D., Secretary.

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Original Contributions.

The Luminous Beam.

BY JOSIAH HARTZELL, CANTON, OHIO.

[Read before the Sanitary Convention held under the auspices of the State Board of Health, at Akron, Ohio.]

ALL intelligent workers in behalf of good health clamor for ventilation.

Why?

To the end that the air to be breathed into the lungs may be abundant in supply and pure in quality.

Why?

This second "why" does not admit of so quick a reply. It will be my aim, in this paper, to furnish an answer which, if not as complete as could be desired, may at least have some suggestive value to those whose studies in this field of experimental knowledge have barely commenced.

Every one is familiar with the appearance of a sunbeam piercing the darkness of a room. If you will enter such a room, entirely darkened, admitting the sunlight only through a very small aperture, and will attentively examine the luminous beam, you will find therein something worthy of your profound attention. If the prevention of sickness, and if good health, are subjects in which you take a real interest, you will linger long in the presence of the beautiful beam. You will admire its silvery splendors; but you may also derive from it lessons that will be converted into priceless blessings for you and those you hold dear.

In viewing the beam, the first question to arise is, What

do you see—of what material is its visible portion composed? Although it has a smoky appearance, it is not smoke, as you may quickly convince yourself by blowing a smoke wreath into it. The smoke looks like another and a very different substance. It is not air, for the gases of which air is composed are invisible; it is not light, for that subtle element, which reveals the existence of all things else, is, itself, also invisible. What we see is, therefore, something borne up by, and floating in, the air. These particles move forever in lines and convolutions indicating the air currents, which in turn derive their motion from unequal temparature and other exterior forces.

The first and most obvious characteristic of these particles is their lightness and exceeding smallness. Some of these particles are not more than one-hundred-thousandth of an inch in diameter. A magnifying power which would show such a germ or atom one inch in size, would show a man, magnified in the same proportion, over eleven miles high. Speaking of this subject, Prof. Tyndall mentions some of these atoms as something beyond the reach of the most powerful microscope.

It seems paradoxical to speak of seeing with the eye that which can not be seen through the microscope. As a matter of fact, we do not see these particles. We see only the light which they scatter. We speak also of seeing the planets, though we see only the light reflected from them.

Another attribute of these particles is that they are organic matter. They are living matter, or are derived from living beings. This is easily proven by experiment. Hold an alcohol lamp under the beam, and the calcined air will ascend through it, making a black opening or spot in its course. This black opening or notch remains filled with air and light, but the heated air arising from the lamp has had the particles burned out of it. There being no particles in it to scatter the sunlight, so much of the beam's track is black, or, rather, invisible. Inorganic matter is, under such conditions, non-combustible.

We come now to speak of the functions of these aerial particles in the processes of nature, and to inquire concerning the powers with which they are endowed. These are secrets with Dame Nature held on to with an assiduity that defied all aggressive effort, until the year 1837, when Schwann made forcible entrance. Following him, and greatly adding to the discoveries made by him, have been

a considerable number of others, of whom Pasteur, Cohn and Koch are the most illustrious representatives. The discovery of paramount importance made and verified by these scientists is that these aerial particles are the indispensable factors in all fermentation and putrefaction—those recognized phases of the return to the atmosphere and to the soil of all that has lived.

A glass of cider, a dead cat, a broken egg exposed to common air, undergo a speedy and radical change. But if our beam fell upon these substances only after they, and the beam itself, had been cleaned of all this dust, as the air was in the invisible space over the spirit lamp, then this change would not take place—the cider and egg would remain sweet, and the cat would never putrefy. From time immemorable it has been believed that the oxygen of the atmosphere wrought these changes. This opinion was so learnedly and elaborately defended by Liebig that the scientific world had to have all the evidence of a doubting Thomas before it would yield. But now the oxygen theory is a thing of the past, and every housewife who puts up a can of fruit shows its fallacy. Most interesting experiments have been made by the professors whom I have named. I will take time to describe only one, made by Tyndall.

He used an air-tight box, about 2x3 feet in size, and 18 inches high, with a glass front. In the middle of each end was a circular hole, three inches in diameter, covered with glass. Through this box he sent his luminous beam. In the bottom of the box were fixed a dozen test tubes, with half their length projecting below the bottom, while their open upper ends were inside the box. A tube, open at both ends, was fixed in the top of the box, but was tightly stuffed with cotton-wool. This admitted outside air, but strained it of its dust particles. The interior of the box was coated over with glycerine. Admitting the beam, he could see it, presenting, as it did, the same appearance inside the box as it did before entering, and after shining through at the opposite end.

At the end of three days, during which the box had rested motionless, he again sent the beam through the box. This time no beam was visible in the box; all was darkness, though before entering and after leaving the box, the beam stood out clearly defined in the open air as before. The ever-moving air currents had deposited all the floating particles in the box against the sides and bottom. The air *in*

the box was now the same as that outside, except that it was cleaned of its floating dust. He then prepared an infusion of rabbit meat, and, by a skilful device, filled the twelve test tubes inside the box, and also twelve test tubes just outside the box, bringing them all to the boiling point after being filled. All the twenty-four tubes were treated exactly alike, the upper open ends of twelve of them being inside, and in contact with the dustless air, and twelve opening outside into the common air. By bringing the infusion in all the tubes to the boiling point, it had been sterilized; all the living germs and organisms contained therein were killed.

After a lapse of four days, the infusion in the outside, or exposed, tubes was turbid and flecked with specks of mold, while the fluid in the inside, or protected, tubes was unchanged. Four months afterward, the liquid in the protected tubes remained void of life and sweet as on the first day, while the infusion in the outside tubes had become thickly turbid, gave out a putrid smell and swarmed with life. Under a lense of 1,200 diameters this turbidity resolved itself into bacteria in active motion.

During this entire period no effort had been made to prevent the inside tubes from meeting the air in free contact. The box contained 1,666 cubic inches of air, and this air was in constant communication with the outside air through the cotton-wool plug, and yet the liquid in these protected tubes, if not evaporated, would be to-day, after a lapse of twelve years, as void of life as when the experiment was made. Among the organic products which were similarly treated by Prof. Tyndall, and with substantially the same results, were mutton, beef, pork, urine, hay, turnip, haddock, codfish, herring, eel, oyster, liver, kidney, chicken, grouse and pheasant.

Every can of fruit is a witness in this case. All life in the mass is killed by boiling, thoughoxy gen and moisture are retained. But the germ-laden air is kept out by wax or cement. In fact, the identical experiment of Tyndall is now practically duplicated in everyday life by the use of cans made with elongated necks, so that instead of cement a cotton-wool plug is inserted, and the preservation of the contents from change is equally assured.

Having thus apprehended the real functions of such dust particles as are found in healthy air, certain fanciful writers have amused themselves by drawing pictures of the earth's surface as it would appear in the absence of this dust. The

imagination may, indeed, run riot if it can conceive of a world in which animal and vegetable bodies were not liable to the changes wrought by putrefaction and fermentation; of an earth whose surface was crowded with the corpses of men and animals that could not possibly be cleared away or chemically transformed. Such vaticinations are, however, without utility, excepting in so far as they emphasize the importance of the part taken by the dust particles in the compensatory economics of nature, of life succeeding life under changed forms; of the infinitely little endowed with powers of infinite greatness. As well could the metamorphoses upon which continued life depends go on in the absence of water, food and the gases of the very air itself, as without the floating dust in the luminous beam.

Every one knows, or ought to know, that the sanitary trinity is pure soil, pure air, pure water. Mother earth, mother of all our blessings—and of our ills, too, if by our unclean practices we come to merit her chastisements—stands first in importance. The air, although a derivative factor, well deserves the second place in the trinity. We live, move and have our being in this fluid, as fish do in water. Considered in its relations with moisture alone, or with temperature, it is an element of the most profound scientific as well as of vital interest. But in the present case, we turn our backs upon these promising fields of physical inquiry, and ask renewed attention to the infinitesimal inhabitants of our luminous beam.

Of this dust-laden air, we take into our lungs, on an average, 18,000 pints daily. Pure air is composed of a little more than one part of oxygen to a little less than four parts of nitrogen, a varying amount of watery vapor, $\frac{33}{100}$ of one per cent. of carbonic acid, and a trace of ammonia. Every person should have a minimum space in which to breathe equal to 600 cubic feet, so arranged that the supply could be renewed twice every hour. This is the recommendation of the English Barrack Commissioners after a most exhaustive study of the subject of ventilation. Breathing is the first thing we do in life—and the last. It is the most important vital process, and a large share of physical derangement is attributable to the presence of impurities in the air we breathe, arising from both suspended and gaseous matters.

Those engaged in the trades and mechanical pursuits suffer largely from the inhalation of suspended impurities, which, in this case, may be of inorganic as well as organic

origin. The very names of certain maladies indicate their causes, such as the "Black-lung" of colliers; saw-grinders' Consumption;" "Potters' Asthma;" "Brass-founders' Ague;" and "Lead Colic." Match-makers, flour and spice grinders, iron-grinders, workers in flax, woolen and cotton mills, all are forced into contact with air rendered more or less objectionable by their occupations. In all these industrial employments it might be shown that both the sick and death-rate have been materially lessened by promoting ventilation; notably, by the application of certain devices for the protection of workmen from the inhalation of dust and hurtful fumes. As a rule, the particles given off into the air by the trades are only irritating, and are hurtful in proportion to their concentration, and it is rational to hope for the abolition of the evils arising therefrom.

The common daily occupations of men illustrate the same truth. Taking the standard of mortality as 100, the rate for barristers is 63, clergymen 71, grocers 76, farmers 85; these are below the average. Above the average we find tailors 109, butchers, 111, printers 115, painters 120, barbers 127, liquor dealers 138; all of which is simply another method of saying that just in proportion to the freshness and purity of the air supply is health secured and life lengthened.

The atmosphere may also be made unfit for respiration by decomposing vegetable matter, such as the air of marshes, showing an excess of carbonic acid, carburetted hydrogen, and moisture highly favorable to the growth of infusorial life. Thence come febrile, malarial, and gastric derangements. Entire communities made feeble and pallid by these causes, during the early settlement of the country, are yet within the memory of many of us. Drainage and ventilation is the complete cure.

Air rendered noxious by the effluvia of decomposing animal matter is also to be carefully avoided, laden as it is with ferments, and fertile for the quick reproduction of any infective germ which might by chance get a lodgment therein. Such are the gaseous matters arising from dead animals; from butcheries, and even from grave-yards. The English report on "Extramural Sepulture," in 1850, shows that thickly crowded grave-yards, if not actually productive of disease, do certainly increase the sick and death rates in the immediate neighborhood.

The subject of sewage, of the disposal of wastes emanating directly from the house and its economies, is so fruitful

that I do not dare to enter upon it here. Many books have failed to contain a tithe of the proofs of the damage done to drinking water by sewage; more especially by that which is stored in cesspools. Nearly as much might be adduced to show the danger of air pollution from the same cause. Thousands of houses, even bedrooms in houses, are now connected with these fountains of putridity. These connections are often faultily made both in principle and construction, and then there is no end to the foul myriads that rise up into the beam, and all night long are sucked into the breast of the sleeper. Typhoid and remittent, and intermittent fevers along with the rest, sometimes; and then there is the long train of sickness and sorrow, and, perhaps, a train to the cemetery. The remedy for all this is most simple: Study sanitation. Practice its lessons. Be a benefactor. Read about Moses and the paddle. Abolish the cesspool. Clean up and keep clean.

That putrefying wastes hidden in the ground hurt the air, is a fact of which every sensible person must be convinced. A gas leak, ever so deep in the ground, is perceptible over a large area. (The particles most desirable to be avoided are not, however, always recognizable by any odor.) A constant interchange, induced by differing temperatures, is going on between the ground air and the free atmosphere. In winter time, when the surface is frozen up to the walls of the houses, this interchange goes on most actively inside the houses themselves.

Hence, our much vaunted healthy winter seasons have, notably in towns and cities, become very sickly seasons.

Probably the source of defilement of which our luminous beam has most cause to complain is the vitiation it suffers by respiration and re-respiration. In this I include impurities from both lungs and skin. Inhaled air has 21 parts of oxygen; exhaled air has 16 parts of oxygen and 5 parts of carbonic acid—a poison. Illustrations of air made putrid by respiration are infinite in number, and, in variety, range all the way from the 146 prisoners confined in the "Black Hole of Calcutta," of whom 123 died in one night, to the pale dyspeptic headachy laggard, who sleeps in his pent-up bedroom, dragging his slow length along through life in his shameful ignorance of the glorious air outside, which needs only a crack through which to enter and put new blood into his veins and new courage into his heart. Concerning the changes produced by respiration in a closed air space, an

eminent chemical and biological authority says: "The amount of oxygen is greatly lessened, the carbonic acid and watery vapor are largely increased, ammonia and organic matters are evolved, and suspended matter, in the shape of low forms of cell-life and epithelium scales, is thrown off."

Now the volume of carbonic acid exhaled by adults will average sixteen cubic feet every day. The moisture given off by the lungs and skin, charged with putrefying substances, as it is, is estimated from 25 to 40 grains in 24 hours. A family of five persons, occupying a room twelve hours a day will send off into it in the course of a year, 38 pounds of organic, putrescible matter. "If where a number of persons have been assembled, the condensed breath on the window panes be collected and burned, the smell of singed hair will easily show the presence of organic matter. If this condensed breath be allowed to remain for a few days on the glass, the microscope will show it to be alive with animalculæ."

Every one has been present in theaters, conventions, churches, or other crowds, where only several hours of such an air-supply sufficed to produce languor, pain and general discomfort. Protracted breathing of such an atmosphere would be intolerable. Nor is the respiration of the same air over and over again in mixed assemblies, made up of the healthy and unhealthy, devoid of dangers of a quicker capacity than the effete and slow-acting poisons given off by the vital processes. But enough has been said to show the great need of an abundant fresh-air supply in public halls, schools, shops and churches. In the planning of these edifices ventilation is apt to be either entirely neglected or put off to the last. Its importance entitles it to stand, if not first, certainly side by side with temperature and light.

The most potent and widespread of the predisposing causes of disease is now recognized as being air that has been already more or less frequently respired. There is indeed food for grave reflection in the thought that most of the poisons from which we suffer are made by ourselves—that "our own breath is our greatest enemy." The dangers menacing us from exterior causes are small in comparison.

That pain is not felt at once is not evidence that no harm has been done. The effects of vitiated air are slowly, perhaps imperceptibly cumulative, and when—either from alcoholism, sewage air poisoning, or crowd poisoning—the system is depressed and the vitality of the tissues is reduced

below the resisting point, then the danger from infection is immeasurably augmented. Pure air is abundant. Let every householder see that his house admits a full and free supply.

One-third of our lives is passed in our bedrooms. At least once a day the free sunlight and air should be permitted to penetrate them to their remotest parts. The luminous beam should shine with greatest effulgence and purity, thus furnishing to the sweet restorer the substance with which to replace our wasted tissues with sound material, and send us forth on the morrow with replenished vigor, and a step elastic with good health.

Now we have seen that the air everywhere holds in suspension the seeds of putrefaction and fermentation; that in the fruition of these seeds, benign changes of inexpressible utility in the terrestrial economy are wrought. Upon healthy living beings, however, it is probable that they, in their drier state, exercise no appreciable influence. They completely change organic matter, both in form and texture. Upon organized matter they are inert, when they get access to the body only through natural channels in a state of health. If they are introduced into the blood through open wounds, there is no such immunity. But, even under these conditions, the careful application of germicides has obviated dangerous consequences from this source. This method, also an offspring of the germ theory, is one of the most important forward steps in modern surgery.

The germs of infectious diseases are organized matter. These invisible foes of human life multiply themselves indefinitely from the products of decay. When epidemics of filth diseases are abroad in the land, communities that have set their houses in order rejoice in the immunity arising from the absence of that putresence which is the favorite nourishment of these dreadful destroyers. Whether the ray beams upon us as a friend or an enemy, depends, therefore, upon the floating particles contained in it, other than those we have already been considering.

Air should be inhaled through the nose, by which its temperature may be modified; and many particles that might work injury to the more delicate texture of the lungs, are held back by the moist interior surfaces. But at times the beam becomes the home of enemies of so subtle a character that they defy the watchfulness of our nasal outposts, and fix their lodgment in the system. The boy with the whooping-cough comes shouting along and lances into the

air that invisible something which, inhaled by another boy, makes him a terror all winter long. Small-pox, scarlatina, in the full vigor of all their terrible powers, may ride lightly and unseen among the children of the beam.

It is important to keep in mind the distinction between these dry, floating germs and the soft, sensitive organism, called bacteria, to which they give birth.

The incubative term and process of these living atoms, forms a most interesting study, but here the debatable band between established fact and theory has considerable width. It is proven:

1st. That this floating dust is organic, being partially living germs.

2d. That, being deposited in a favoring element, the latter give rise to forms of life, sometimes with and sometimes without motion, in periods ranging from one hour to fourteen days.

3d. That, while the germs of putrefaction, everywhere present in the atmosphere, are powerless to disturb the functions of animals in a state of health, other germs are sometimes present, which, when inhaled into the throat and lungs, find there the conditions suited to their development and reproduction, resulting in impaired vitality and often in death.

4th. The prevalence of poisonous germs, whether of diseases well or illy defined, is powerfully stimulated by the presence of heat, moisture, and the gases of organic decomposition.

One theory is that the virulence of certain diseases is greatest during the incubation of the germ. This view gets some plausibility from the fact that first cases, in an epidemic of filth disease, are the most violent and deadly, and that this violence is apt to be more and more modified until the epidemic dies out. A portion of the energy of the virus consists in its passage from the germ state to that of the finished organism.

Other phenomena warrant the belief that other maladies—notably such as are communicated by contaminated drinking water—are induced by the perfected bacterium.

A further investigation of this phase of our subject would be of interest, but in a limited review like this, it may well be omitted, until theory has been supplanted by the explicitness and authority of the fact.

Some of these children of the beam, like other *enfants terrible*, with whom we have had a more tangible acquaintance, have their inexplicable whims. If they have once essayed their powers on a human body, and the body survives, they generally furnish it with a certificate of immunity. This class of non-recurrent maladies is to that extent self-limiting. They have also been limited, with priceless blessings to humanity, by artificial means—by vaccination. In the sanitary millenium that is to come, the roll of the twelve apostles will commence with the names of Jenner and Pasteur.

The most curious and important fact, recently established, is that many of these disease germs are now artificially cultivated outside of the human body. Dr. Koch has bottled up in his laboratory, at Berlin, the materials with which he can infect certain animals with cholera and consumption at will, with absolute certainty. These and other organisms have been photographed, engraved and shown, as are other forms of life. Their virulence can be increased and, in a few instances, diminished, or "tamed;" as in the case of small-pox, already referred to. But, while a few additions have been made to this "taming" process, and we hopefully wait for others to be discovered, there are three ways of dealing with these enemies: First, disinfection—destroy the germs; second, cleanliness—destroy what they feed on; third, isolation—cut the channel of communication.

Yet, while purity of environment, isolation and disinfection may bar these scourges at a safe distance, there is, in the prevention of these preventable ills, imperative need of organized effort. Happily, we have at length, even in Ohio, a nucleus about which the helpers in this field may rally. It is our duty to give our State Board of Health that help and that quick coöperation which will enable it to interpose for the arrest of epidemics, whether of foreign or domestic origin, with all the light that scientific experiment affords, and with an ample equipment of power.

The blessings that have been reaped in this field constitute the brightest page in human achievement. The retrospect of only a few lifetimes carries us back to the era when the average duration of life was only twenty years, and when one-fourth of the population of Europe, twenty-five millions of people, fell before a foul and loathsome disorder. Now, the mortality record of all the cities in the world is published statedly, and any undue swelling of figures fixes instant

attention upon the danger point, and results in barring its extension with the safeguards of modern discovery.

Health is not the exclusive possession of any class or rank. Money can not buy it; neither will poverty drive it.

Diogenese—poorest of beggars—gave the world a most valuable hygienic maxim when he told Alexander—greatest of conquerors—to "stand out of his sunshine." Nor can health be secured by mere legislation. A law may secure a pure water supply; but it can not compel people to use it. Sanitation must come through individual effort. With all the collective help that can be obtained, there will remain abundant need of personal vigilance. Only a fool shuts his eyes until he runs against a post. It is known with perfect certitude that reproductive parasitic life is the cause of epidemic disease, and a man can not be exonerated from the consequences of his acts by pleading ignorance, either of God's laws or of man's laws. If he sees a thistle growing in his field, he knows that a thistle seed has been wafted into his grounds. And if a contagious disease is developed in his family, he can rest equally well assured that the seed which gives rise to it is derived from a previous case of the same disease.

Every epidemic disease produces its like as assuredly as the thistle.

Common seeds do not always germinate; neither do the infinitesimal seeds in our luminous beam. Conditions of temperature, moisture and light have their varied effect upon the one as upon the other. We know that the germs of putrefaction require moisture for their fructification. Heat kills them. Warmth and darkness promote their multiplication and development. They are benumbed by cold.

For this reason meat, and even fish, may be kept sweet for long periods by the application of a low temperature. Three men fell into an Alpine crevasse, and, being frozen into the ice, preserved their integrity of body for forty years. The flesh of the hairy elephant, found in the Siberian glacier, after a lapse of probably thousands of years, was not affected with putridity, but was nutritious and adapted to the support of animal life.

The germs of virulent diseases are sometimes long-lived. The only safety is either in their avoidance or destruction. Clothing, especially woolen fabrics, if not purified by thorough ventilation or disinfection, has been known to convey scarlet fever, one, two and even three years after it

was impregnated with the contagion of that disease. A glaring illustration of the possible disasterous results of incaution in this respect, comes under my notice while preparing this paper. I cut the same out of the current daily telegrams, and read as follows:

"DIPHTHERIA AT WELLSVILLE, OHIO."

"WELLSVILLE, O., December 15.

"Diphtheria is epidemic here. After a post-mortem examination on one of the victims, Dr. N. C. Kale took a portion of the diseased membrane of the throat to his home for investigation. He carelessly allowed his children to view the germs through the microscope, and two of them were attacked with the disease and died, while the doctor himself succumbed to the disease Tuesday. Five other children are now at the point of death."

The detriment that may ensue from these influences, depends, somewhat, as I have already shown, upon receptivity—upon physical condition—and this, in turn, depends very largely upon the presence or absence of a pure air-supply. It is also shown that certain irregularities must be attributed to states of the atmosphere which have been spoken of as bacterial clouds. One fact has been verified by frequent experiment, viz.: that these living organisms are far more abundant in the contiguity of inhabited districts than where animal life is absent, or nearly so.

Pasteur found that meat infusions left open to the air, were, in a given time, twenty-one times as liable to be infected in Paris as on the Merde Glace. A great many English experiments, having for their object the testing of city and country air in this respect, are on record, and are, in all instances, confirmative of the statement I have made.

One of the most venomous parasites that may rise into the beam and scatter its light, has been differentiated by Dr. Koch—the inciting cause of phthisis. Its mode of conveyance may be the sputa of the consumptive, which, being dried and ground into dust under foot, rises into the air and gets a lodgment in the lungs. Circumstances antedating Koch's discovery, render this method of infection strikingly probable. In 1858 the British Army Sanitary Commission proved, beyond all doubt, that the excessive mortality from consumption among soldiers in particular regiments, was due to overcrowding and lack of

ventilation. Previous to their report, the soldier in the barracks of the Foot Guards, had only 331 cubic feet of air, and the phthisis mortality averaged 14 per 1,000. In the Horse Guards, where 572 cubic feet of air was allowed to each man, the mortality from consumption did not exceed 7 per 1,000. This mortality rate was about the same in all climates, the vitiated air of the barracks being the only condition common to them all. The Commissioners ordered the allowance of air space to be increased, in consequence of which the number of phthisical cases was greatly diminished.

These facts bring into clear relief the danger of frequenting places where we are liable to take into our lungs the injurious refuse materials given off in air that has been already used. Filthy, and often diseased, people are liable to push their way into such crowds, and to load the air with foul and pestiferous emanations, which may thus come in contact with the blood stream, which, at the rate of many barrels a day, is coursing its way through the fine capillary vessels of the lungs.

In preparing this study of atmospheric phenomena, I have relied partially upon the labors of purely scientific experimenters, but chiefly upon the works of physicians. And this furnishes me a pretext for stating it, as my personal experience, that the more ardently we endeavor to pry into the reasons for ill health, the more hearty and cordial is the coöperation we get from the truly intelligent physician, upon whom we are, after all, forced to rely. All of us can not be physicians; but all can study how to live, and the true physician there ever ready to be our schoolmaster. He has himself, in the past twenty years, made forward strides just as far-reaching, and of far more blissful import to our firesides than aught that has dazzled the world from the realm of the mechanic arts. The beam of sanitation—once obscured by prejudice and ignorance, and wintry with empiricisms—has been made gloriously luminous by the self-denying and the self-imposed labors of the greatest benefactors of mankind. It shines upon the pathway of life, revealing the rocks and pitfalls that beset its course, and showing many an open gate by which we may escape that evil heritage of ills, to which all mortal flesh is heir.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

MITRAL INSUFFICIENCY; DIFFICULTY OF DIAGNOSIS AND OF PROGNOSIS.—BY P. DUROZIEZ.

MITRAL insufficiency is difficult of diagnosis; the prognosis is not less difficult to make. Is there a lesion of the mitral valves? What will this lesion eventuate in? Will it become aggrevated? Will it be cured? The diagnosis of mitral insufficiency is pronounced with an ease and tranquility that is really astonishing. It would be more correct to inscribe a murmur at the apex. Shall we say to the patient or to the family that there is disease of the heart because we have heard a murmur (a bruit de souffle) at the apex? We are not justified in doing this if we find no other symptoms.

The apex is the rendezvous of many murmurs coming from all the orifices; and, furthermore, this is an important point—there is the chloro-anemic state which frequently intervenes.

By what symptoms can we recognize a mitral insufficiency? The murmur passes to the back of the chest; the first sound is absent; the souffle is of the character of a jet of steam, has no attachments with the murmurs; rales are heard in the chest. But we do not find these symptoms at once.

There are doubtful cases.

The augmentation of the volume of the heart is sometimes a delicate sign. We sometimes declare hearts as dilated, which are not so at all. We feel the apex in the fifth intercostal space; it is really only in the fourth; the spaces were wrongly counted, which does not infrequently happen. The percussion was badly made, the heart is not enlarged, as has been declared.

The first sound may still be present if the mitral valve is not rigid. Insufficiency, if the valves are still supple, can only exist when they have been raised up, and, consequently, have produced a clicking sound. The first sound indicates a non-disorganized valvule; we may retain some hope. It is important to note the presence of the clicking, and its timbre more or less normal.

A history of acute articular rheumatism in the antecedents renders the prognosis more gloomy, but fortunately rheu-

matism is not always followed by mitral insufficiency, and we must not affirm an insufficiency by a single explosion of rheumatism. If there have been several attacks, there is a great chance for the diagnosis being more positive. The patient has remained under the influence of the rheumatism; which has had time to disorganize the valves and the whole circulatory tree trunk, branches and roots.

Finally, a sign of the greatest importance is the absence of murmurs in the neck. We will commence by auscultating the neck and learning therefrom what we can. It is not probable that chloro-anemic bruits should be formed in the heart without their being heard in the neck. If we find marked chlorotic murmurs in the neck, we must distrust the the cardiac murmurs and rather ascribe them to the chloro-anemic condition present.

Stokes was not particularly in love with auscultation; still it aids the diagnosis, of which part can not be made without it, and contributes somewhat to the prognosis. One may live a long time with a lesion of the valves—how long? Auscultation will not tell us. But we are of the opinion of Stokes when he says that the great objective point—and this can not be too frequently repeated—is to establish that the murmur proceeds from an organic cause.

Stokes was preoccupied with the question of anemia in lesions of the heart; he studied more the combination than each of the elements.

In some cases the valvular lesions do not progress, or if they do, it is so slowly that they constitute a class by themselves. Stokes cites the observation, of one who affected with bronchitis although not complaining of any trouble attributable to the heart, is found to have a murmur masking the first sound of the heart to the left. He is compelled to change his mode of life and habits. Stokes was now called to see him. His appearance is good, pulse regular, normal; heart tranquil. No palpitation at any time. Stokes finds the same murmur at the apex. Seven or eight years before the patient had had a severe attack of rheumatic gout. The heart lesion, which dated back so far, had not progressed; the valves had undergone some change, but not to such a degree as to interfere with their functions. Stokes allows him to resume his former mode of life and habits. The murmur remains the same and the patient has excellent health.

Stokes concluded that this individual had carried this

murmur for over a dozen years, and that it was imprudent to change a mode of life which had not produced any accident.

How many cases analogous to this. One may have for years a rasping murmur and still be able to take violent exercise, says Stokes. The advice of Stokes is imprudent. Moderate exercise is always good, but violent exercise, is it always favorable?

Another case, says Stokes, wherein the practitioner should be rather reserved in his diagnosis and prognosis is that where we find a combination of organic and anemic murmurs. This combination is not rare, especially in young persons; it is frequently difficult to say which was the initiatory murmur, that of the organic lesion or of the functional lesion.

In these cases Stokes advises that only the anemic state be treated. This is a point of great practical importance. Not all physicians are of this opinion.

In this case, says Stokes, the nature of the malady being doubtful, we believe it but just to give the patient the benefit of the doubt, and, consequently, our attention will be directed more to the general than to the local state. We could not say whether the mitral murmur was entirely functional or in part organic, but we could recognize the anemia by the general history of the patient, by the scant ness of the menses and by the arterial souffle with a clear second clacking. The life of this patient was prolonged by a treatment which neglected altogether the organic lesion, and which, according to many physicians, should have aggravated it. The remedies which restored the patient to health were iron, quinine, wine, exercise and participation in all the pleasures of a rich life. We were guided by the absence of symptoms and signs of confirmed lesion of the heart, an absence which is not as rare as generally supposed.

We hold the same opinion as Stokes; it is not the murmur at the apex that must be attended to, but the general state. Mitral insufficiency can not be very frequent, certainly not as frequent as it has been made out to be. We have been compelled to admit a category of functional insufficiencies, because in many cases post-mortem examination did not reveal the absolute insufficiencies that had been diagnosticated during life.

The valvular lesion does not always progress. There are cases wherein the grave accidents do not manifest themselves until twenty or thirty years after the discovery of the mur-

mur at the apex, and this in laborers who have taken no particular care of their health. Stokes proposes a special class for such cases.

Conclusion: The diagnosis of mitral insufficiency is difficult and important.

The murmur at the apex does not necessarily indicate mitral insufficiency, it appertains to all the orifices and to chlorosis.

Functional insufficiency does not exist outside of osystoly.

We must choose between organic lesion of the valvular apparatus and chloro-anemia, which frequently exist cotemporaneously and reinforce each other.

The prognosis of true mitral insufficiency depends upon its origin, rheumatic or other, diathesic or transitory. It is rendered much more serious by pregnancy.

One may live a long time with a mitral insufficiency. A recent lesion may be cured.

Before all, does mitral insufficiency really exist?—*Trib. Medic. Un. Med. de Can.*

Alcoholic Inebriety, as Related to Responsibility, and Criminal Jurisprudence.

BY T. L. WRIGHT, M.D., OF BELLEFONTAINE, OHIO.

Read in the Section on Medical Jurisprudence at the Thirty-ninth Annual Meeting of the American Medical Association, Cincinnati, May, 1888.

RESEARCHES relating to the effects of habitual drunkenness on the structure of the heart and blood vessels; and the known connection which often exists between heart disease and insanity—especially described by Dr. Wm. Julius Mickle in his recent Goulstonian lectures—open a door for investigating the influence of inebriety upon the mental and moral movements. That the heart is very likely to become dilated in the habitual drunkard, when its pulsations increase in frequency from seventy beats per minute to at least eighty-five per minute as a stated thing, is apparent. For the latter figures represent an extra and unnatural labor imposed upon the heart of nearly eight millions of beats per year—a change of heart beat from thirty-six millions to forty-four millions, in round numbers, per annum. And that the large arteries also must sympathize and suffer with the heart is evident, for they neces-

sarily become enlarged, lax and bagging, as their tonicity and elasticity are gradually weakened or destroyed by constant and violent stretching. Of course such a state of the circulation, at one time strained and overwrought, at another, powerless and creeping, but with a heart beat always rapid, favors the advent of melancholy moods, leading to despondency and suicidal insanity.

It is obviously impossible, in a brief paper, to go over the whole field of the mental and moral disabilities imposed by alcoholic indulgence. I will therefore omit further reference to the changes and diseases of the circulation as factors in the disturbance, or the destruction, of the reasoning faculties, and confine myself to the moral and intellectual incapacities directly traceable to the toxic impression of alcohol upon the nervous system.

The anæsthetic, the benumbing, the paralyzing influence of alcohol upon the nervous system, and especially upon common sensation, always darkens knowledge and misleads the judgment. This follows from the fact that accurate perceptions are wholly dependent upon definite and normal sensations. When the senses are disturbed and impaired, perceptions are correspondingly disturbed and impaired; and they are unable to present to the mind facts as they truly are—as they really exist in the surroundings. The fine shadows, and uncertainties and doubts, which invariably attend all human transactions, escape the notice of a man who is intoxicated; and being unperceived by him, he imagines they do not exist. Every thing has, to his mind, the quality and energy of absolute demonstration. He never hesitates, never doubts. He is, therefore, a bad, as well as a dangerous, witness in a court of justice, and particularly in criminal proceedings—where he is very likely to appear—bad from defective knowledge, and dangerous from a morbid positiveness in conviction and assertion. It seems probable, indeed, that a drunken witness testifying as to events observed while sober, is more trustworthy than a sober witness testifying as to events observed while intoxicated.

The drunken man is always in a state of partial anæsthesia. Everybody dislikes the familiar approach of a person thoroughly intoxicated. The sense of feeling in such an individual is benumbed, and he seizes the person of any one near him in a rude and rough manner. His touch, or rather his grasp, is painful, because it is violent. The

inebriate unconsciously exerts a considerable degree of force in his movements in order that he may be assured, or may feel, that he really is in contact with persons or things exterior to him.

This imperfection in the sense of touch is one of the indications of partial paralysis in the nervous system at large. Indeed, the general insensibility of nerve arising from alcoholic influence will become apparent upon a superficial investigation. The muscular sense is greatly obtunded, as is evinced by the staggering gait, the impeded articulation, the unfixed eye and the distorted countenance. The senses of sight, of hearing, and even taste and smell, likewise show evidences of disturbed and restricted function in various forms of illusion, hallucination and incapacity. Partial paralysis depresses the ordinary senses without exception when they are brought under the dominion of alcoholic liquors.

Paralysis, in whatever degree it exists, withdraws function in a corresponding degree from the control of volition. No effort of the will can remove, to the slightest extent, the incapacities of paralysis. Apparent exceptions simply indicate imperfect paralysis. In this respect the effects of alcohol differ from those of opium and chloral and tobacco. Weakness, debility, prostration respond in some measure to the calls of volition; paralysis does not. Hence, the responsibility of inebriety is modified and peculiar. It differs from the responsibility of common narcotism; and very often, indeed, it is less in degree.

The organic nervous system of the alcoholic inebriate is equally and similarly affected with his nervous organism elsewhere. The drunken man perishes from cold more readily than the sober man. For not only does alcohol abstract oxygen from the blood corpuscles, and thus "slow" the ordinary physiological combustion of the body, but it benumbs and paralyzes the heat centers, and sensibly hinders and weakens their functions. Here is the point where alcohol becomes a valuable therapeutical agent in reducing abnormal temperature in disease. "Alcohol lowers, opium raises, temperature," says Dr. Norman Kerr in his recent work on inebriety. Alcohol paralyzes universally, opium does not.

The paralyzing property of alcohol is that through which it is enabled to masquerade in the character of a food; a food, indeed, which possess in its own nature no single

suspicion of nutriment; a food "in a certain sense" as it is described; in brief, a "waste-restraining food"—whatever that may be. The inquiry arises: What are the achievements of such a food in building up and sustaining the physical organization? The answer appears to be this: When egg, milk, beef, potatoes, etc., have constructed and nourished the human body, alcohol, by its paralyzing powers and properties, interferes with and prevents the natural and physiological waste of the organism; and thus it keeps locked up in the system for a period of time longer than is natural, matters which otherwise would have been cast out as effete and poisonous. Audacious assumption will sometimes deceive the very elect; and although alcohol is compelled to take a dark and tortuous way to attain to the unsubstantial semblance of "food," yet the false pretense may, in thoughtless minds, rehabilitate, somewhat, a reputation badly tattered.

Still these disabilities imposed upon the several senses, and upon the universal nervous powers through paralysis, do not fully measure the disasters brought upon the human capacities and potentialities by alcohol. These wrongs and injuries are, indeed, merely elementary; but being elementary and alphabetical, they are the keys to the interpretation of whole libraries of moral, mental, physical and constitutional debasement and destruction.

It is impossible for a mind, when the senses are obscured and lifeless, to receive accurate knowledge of persons and things exterior to it. But if it were possible that such knowledge should by some means become the property of mind, still, universal paralysis of the brain (although limited in degree) would prevent the normal use of the reasoning faculties, and knowledge would become the basis of mistaken and perverted conclusions. Again: If, perchance, the reasoning faculties should act with precision and clearness, the coördinating centers of the brain would be incapacitated for analyzing the relative quality of convictions, and the moral activities would be found halting and repressed. Moreover: Even if the moral nature was not thus embarrassed, still, this same brain paralysis would dull those finer distinctions both as to conviction and duty which are essential to the formulation of proper and rational motive and choice—perplexing the will and precipitating an irrevelant and irrational conduct.

When the receptive faculties are in good order, it may

be presumed that all other mental powers are probably in like order. I mean as a general rule, for I am not ignorant that moral insanity and imbecility of will are held by many to present independent features. On the other hand, if the receptive mental faculties are impeded, or modified, or insensible, it is presumed that most commonly all the other faculties, both of mind and sensibility, are likewise defective and unreliable. Dr. T. D. Crothers has directed attention to a mental state sometimes found in the inebriate which he has called alcoholic trance. If a person can not see clearly, hear correctly, smell, taste and feel accurately, if, indeed, he is in a condition of partial paralysis in his entire nervous system, he is very liable to lose his sense of personal identity, so far at least as to be oblivious to what transpires with relation to himself while in that state of impaired insensibility. For it is the impeded action of the senses, and the feeling of perfect concord amongst them—one with another—which give to a man the idea of his individual existence, his own, his personal identity. Now it is common for a person to say after recovering from intoxication, "I do not remember anything that occurred." While this may be false, it may also be true, for the reason based upon science, as well as upon experience, namely, the drunken man is in every instance partially paralyzed all through. He is thus very prone to lose his sense of personal identity, that is, his sense of relationship with events and things exterior to him. He must be liable to lose his right sense of relationship with other persons and other things, because, being partially paralyzed throughout his entire nervous organism, he has no just and regular and natural sense of anything whatever. In fact, the identity of a person, which is associated with the impeded nervous power of partial paralysis is, to all intents and purposes, the identity of some other, some imaginary person with whom, when restored to its normal condition, the mind can have no links or chains of association. Thus, considerable modifications in the sensibilities may eventuate in modifications in the sense of relationship which the sound mind should sustain to all things else. Hence, though there may be a modified sense of personal identity incident to modified sensibility of nerve, this is not always recognized in memory when the mental powers resume their natural purity and perfection.

These degradations are inseparable from the use and in-

fluence of alcohol. They are totally incompatible with healthfulness of body, clearness of intellect, and strength and delicacy of morality.

The degenerations and disabilities placed upon the human organism by alcohol are of universal application and are practically of the same nature in all cases. Therefore, from whatever position they are viewed, they present the same appearances and conduct to the same conclusions. Examine, for example, the responsibilities of the inebriate from the standpoint of consciousness. Take the definition of Wundt, that consciousness is psychologically a unification, although itself a unit. According to this author, consciousness is not simply "a knowledge," or "function," or "condition." He tries to tell what it is, not what it is for, or what it does. There is no nerve-center of consciousness, and the entire organism is essential to its exposition. "Thus, perception, representation, idea, feeling, volition, form the continuity called consciousness—of which only tautological definitions can be formulated. Taken as a whole, consciousness embraces the following movements: First, impression; second, transmission to a nerve-center; third, general or vague perceptions; fourth, special perception (called also apperception); fifth, voluntary reaction, and sixth, transmission to the motor nerves." But all these elementary constituents of consciousness are benumbed, dulled, hindered, dwarfed in stature, repressed in function and deranged in natural order of procession by the paralyzing influence of alcohol.

Not only is the rational faculty injured by the influence of alcohol, producing confused, incoherent, and inconsequent ideas and beliefs, but the moral attributes are debased in an equal degree. The paralysis of alcohol, although incomplete, fails not to overcome the finer and more etherial sensibilities, while it leaves the coarser ones comparatively unaffected. That is, it destroys the humanitarian sensibilities, leaving the purely animal ones nearly untouched. And this is, in effect, the suppression of the distinguishing characteristics of the human nature and leaving in command the brutish and animal instincts, without check or monitor. What follows? The man does not wickedly and maliciously act *like* a brute, but he has become in reality a brute himself, through the loss or suppression of his humanizing sensibilities.

Latency of function is followed by difficulty, if not even

impossibility, of function, through atrophy of structure. A curious exemplification of this principle is furnished by Dr. Livingstone, the famous traveler and philanthropist. He said that upon coming into the presence of his countrymen after years of absence among the black tribes of Africa, he was at home in everything except his own mother tongue. "I seemed to know the language perfectly, but the words I wanted would not come at my call."

Nothing is more common than that men, after drunkenness, are amazed at the shocking things they have done, or said, or thought, while in a state of intoxication—indicating the latent state of the moral nature in drunkenness. But if the inebriation is continuous or nearly so, that is, if it is habitual, the shocking thoughts do not become the subjects of rational review; and thus the latency of the moral sense becomes fixed, and congenial to an unsound and deformed reason. The mind may seem to know the nature of morality perfectly, but if morality is wanted, "it will no come at the call." It is therefore not surprising that steady drinking, even when not excessive, is more disastrous in the final outcome than the convulsive sprees of the neurotic inebriate. In the latter, the intervening seasons of total abstinence prevent the establishment of habitual disability in the nervous powers; while in the habitual drunkard, nervous disabilities, latencies and inhibitions become perpetual, insurmountable, in a word, *constitutional.*

The chronic inebriate furnishes a ready and sure illustration of the foregoing facts and doctrines. He is debased and defective in every department of his nature. Physically, mentally, morally he is wounded, maimed, crippled, deformed, in equal degrees. Yet his moral deficiencies are the most obtrusive, because they lie most upon the surface. A gentleman of my acquaintance has been a steady drinker of ardent spirits for nearly thirty years. His moral nature is latent—if, indeed, he has any. He is not vicious or malignant, but he is an incessant and shameless, because motiveless, liar. With great coolness he will invent stories totally without foundation and on the most trifling subjects—all the attendant circumstances and details being of the utmost exactness. And so he cackles on, and will continue so to do till the end of life.

Now this seems very foolish indeed, and likewise very inoffensive. But this man is, in truth, on the verge of insanity. Not only is he morally bankrupt, but his intellect is

both sterile and disordered. Amongst the great army of the unrecognized insane there are none more common, or more really dangerous, than the chronic and steady drinkers of ardent spirits. These men in early life acquired the usual habits, both of thought and action, that belong to the average citizen. Automatically, with the guide and hints of the examples of others in their midst, they manage, without much effort, to keep in the ordinary grooves of daily life. If such a man is a farmer, by force of habit he farms as others do; and in a judicial inquiry, should that fact be established, it very likely determines nothing. If he is an artisan, or physican, or lawyer, he may, by automatism and example, pursue his avocation with reasonable success. But let some supreme crisis intervene, so as suddenly to throw him upon his own unaided powers; let instant rage or, what is more consonant with his nerve defect, jealousy, come over his mind and disposition, he will then be thrown out of the grooves of automatic life and, acting upon his own true nature, he will herald to the world his real condition. Then desperation, murder, suicide, true representatives of his actual mental state, will burst unexpectedly upon the scene. To the great body of chronic inebriates this crucial test of insanity is never applied; they live without recognition, and die with their dreadful infirmity unknown and unsuspected.

There is another large field of inquiry related to the jurisprudence of inebriety. It is that one opened by the property of alcohol which promotes proliferation of the interstitial tissue. This field includes the whole organism, for the connective tissue goes everywhere. Dr. Sieveking asserts that "there is scarcely a degenerative condition of the body that may not result from the habitual use of ardent spirits." Dr. Maudsley speaks of that "more dangerous form of habitual indulgence in small quantities of wine and spirits throughout the day by which some active men of business endeavor to spur their overtasked energies." Alcoholic structural affections of the stomach, liver, kidneys and brain are familiar to all. They are invariably associated with physical changes in the connective tissue of the organism; and they orginate from the persistent, the unremitting, the *habitual* influence of alcohol upon the bodily structure.

And this completes the tale of the essential departments of human nature—mind, soul, body. Each and every one is grievously and permanently disabled; and indeed wrecked, in the chronic inebriate.

Selections.

Some Points in Treatment at the Memorial Hospital, Orange, N. J.

BY JOHN H. BRADSHAW, M.D.

THE following notes are merely brief records of some of the more recent cases and methods of treatment at this institution.

Bisulphite of soda solution is mainly depended upon for the treatment of erysipelas. The usual fifty per cent. solution of the shops is diluted with water three times, and is used locally under oiled silk continuously until all redness of the skin has disappeared.

Cellulitis of the hand has met with a steady check by the continuous, cold, permanganate of potash drip, half a grain to a pint of water.

Fistula in ano has here (after the method inaugurated by Dr. Pierson, in 1876) received a most radical, sharp spoon treatment. All sinuses are laid open, and their diseased walls are dissected or scraped away. The wound is then united, under strict antisepsis, with sutures. Several extensive multiple fistulæ are recorded as healed by first intention.

Heaton's operation for hernia has not been successful at this hospital; four cases are recorded.

Nerve stretching for sciatica has met with uniform success. Out of seven cases recalled, six were permanent cures, after having been for years treated in vain by almost every conceivable method. The seventh case was discharged improved.

The diachylon ointment of Hebra has proved the best all-round ointment for squamous eczema. It should be made with olive oil.

Only selected cases of hemorrhoids are injected. The clamp, scissors and cautery have given best results.

Burns, if extensive, after first being dressed with some protective oil or powder combined with bicarbonate of soda, are, upon the removal of sloughs, actually peppered with skin grafts. The compound resin ointment, with carbolic acid, then serves as a mildly stimulating dressing.

The use of dry powdered boric acid packing for cervical

endometritis, erosions and ulcers of the cervix uteri has done away with the glycerine tampons.

Fractures are treated with Levis's splints, Buck's extension, or plaster or silicate of soda immovable splints, as indicated. If of the jaw, the hospital dentists mold a rubber interdental splint. There is an intentional scarcity of fracture apparatus.

Morbus coxerius, if in the first stage, receives a light plaster, or glass spica, high shoe and crutch. If the child is too young to use crutches, it is kept as much as possible running about in a Darrach wheel crutch. (*Orthopedic Surgery.*) The suppurative stage receives operative treatment, and rest in cuirass. Spinal caries is treated by the support of a Sayre plaster jacket and wheel crutch.

Ulcers of the leg, of whatever variety, are usually first poulticed, if sloughy, and, when clean, a dry powder dressing of bismuth, boric acid (impalpably powdered) or calomel is used under bandage from the toes up, with elevation of the affected extremity. Should granulations be protuberant, they are strapped with the ordinary basket strapping of surgeons' plaster.

A recent case of laparotomy for cystic degeneration of both ovaries was delivered, six weeks before the operation, of a healthy child. Only after her confinement, when her abdomen remained over forty-four inches in girth, was she suspected of having an ovarian tumor. A noteworthy peculiarity about this case was that the umbilicus was protuberant, as is seen in ascites. A double ovariotomy was made, and the patient walked about her room on the fourteenth day.

For all operations which are likely to expose and chill the lower extremities, the legs and thighs are wrapped in cotton-batting and loosely bandaged by the nurse, before the patient is brought to the operating-room.

Hick's vaginal speculum has been found to be all that is claimed for it; it is absolutely self-retaining, and gives a wider field for operations upon the cervix uteri than others.

For the last five years Billroth's anesthetic mixture, consisting of ether, three pints, alcohol and chloroform, each one pint (introduced here by Dr. Simpson), has been employed for operations. It is thought to be followed by less nausea than is ether, and is decidedly more agreeable to the patient. The average time of anesthesia is eight minutes.

In our lying-in department we recently had a case of empyema in a woman in her ninth month of gestation. The right pleural cavity was aspirated of a little over a quart of pus at each tapping, three times successively during the five weeks preceding labor; the last aspiration was made two days before her confinement. She was delivered under careful antiseptic midwifery, and recovered from her labor with no untoward symptoms, although her right pleural cavity was again full of pus on the tenth day. She refused permission to make free drainage openings, and, after another aspiration, she carried her child away to her own home, where she was lost to observation.

Pleuritic accumulations of serum are almost invariably removed by aspiration; but when not, active counter-irritation and diuretic treatment are practiced.

More care is bestowed to make the operations aseptic than ever before. Great cleanliness, free use of antiseptic solutions, sterilized instruments, silk, catgut, and wire; the use of boric acid, iodoform, free drainage, sublimated gauze, and indefatigable care and supervision on the part of the head nurse, have made a revolution here, as elsewhere. The Lister spray is only used to wash the air of the operating room before operation. There was recently an abortive attempt to revive the use of the Lister protective. The Mackintosh is still sometimes used when indicated to keep the dressing from becoming too dry.

At the hospital, stimulants are given only when indicated, there being no record of their routine use.

Typhoid fever is treated expectantly. In hyperpyrexia antifebrin in four-grain doses has proved more efficient and safer than antipyrin.

Pneumonia is treated with the so-called pneumonia jacket (cotton-batting under oiled-silk), and occasionally poultices are employed. No medicine is given unless demanded by alarming symptoms.

Those of our consumptives that survive the Bergeon treatment find great relief and sometimes actual benefit from the compound cannabis Indica mixture, introduced here by Dr. J. W. Stickler. Its formula is as follows: ℞. Tr. cannab. ind., ℥ss.; vironicæ (blue verbena), gr. viijss.; ext. buchu fl., ℥j.; pulv. verbas. thap. (mullein), gr. xv.; sacch. alb., ℥j.; spts. vin. rect., ℥jss.; mel. despumat., ℥ij.; spts. chlorof., ℥ij.—M. A teaspoonful of this on going to bed acts as a sedative and anodyne, and is followed by quiet sleep. The

dose, one drachm to one-half an ounce, is given during the day, p. r. n., for cough.

There are three standard cough mixtures: 1. Expectorant (mur. of amm., as its base). 2. Sedative (hydrobromic acid and chloroform with syrup). 3. Expectorant and tonic (mur. ammon. and digitalis its principal ingredients).

We have found a mixture of quinine and alcohol, twenty grains to one pint, of much service as a bathing lotion for night sweats. When this fails, we give the "ward sweat mixture," which contains to each dose, atrophine $\frac{1}{120}$ of a grain, morphine $\frac{1}{16}$ of a grain, acid sulphuric dilute 10 minims.

Acute articular rheumatism is treated most successfully at first with full doses of salicylate of soda at frequent intervals, followed in convalescence by iodide of potash and ferruginous tonics.—*Weekly Med. Review.*

Masturbation in the Female.

Dr. D. H. Toney, of Naples, Me., reports a case (*Massachusetts Medical Journal*, July, 1888) which allows us an opportunity to remark that we fear the profession is not boldly enough instructing their suspicious cases as to the evils of this habit. The subject is so delicate a one to approach in its individual application that the family physician is generally afraid to remark upon it for fear of offering an evil suggestion or giving personal offense where he intends only to do good. As important as is the subject, it is one that should be spoken of in the family only with the greatest circumspection.

The primary factors in the causation of this pernicious habit are psychic and physical. The psychic may be subjective or objective. Subjectively are: 1st, the tainted conditions of heredity; 2d, mental views, distorted though they may be, verified by an equally distorted consciousness. This was the case with Mad. de Warrene, whom Rousseau describes so graphically; 3d, an internal propensity. Objectively are: 1st, Subjective states of mind when persistently dwelt upon; 2d, the moral degradation of nurses; 3d, the exciting conditions engendered by civilization; *i. e.*, unhealthy associations, unhealthy reading, unhealthy and stimulating diet, unhealthy ventilation, the free license of the drama, the close contact of the waltz and the manner of

dressing; 4th, want of proper physiological knowledge. Among the physical causes are those that are cerebro-spinal, cerebral only, or those affecting different parts of the sexual apparatus and ascarides. The psychic and physical causes will be considered in general, as their detailed elaboration would occupy more space than I am entitled to.

In a certain sense it may be asserted that we are processes of heredity, and are evolved from antecedent states and conditions of being. Not infrequently does it happen that a child is born with a predominance of the sensual over the moral, and instances of wonderful youthful precocity are not rare. This tendency to an exaltation of the animal passion may be enhanced by a similar condition in one parent or both, which permeates all of the associations and surroundings of the infant. The natural outcome is a laxity of high principle, a comfortably weakened will, and a moral law enacted to suit the general desires and appetites.

Frequently there is added to this infected atmosphere the care of a nurse, who, to sooth the irritability of the baby, will indoctrinate her with the habit of masturbation, by first using her own hand and then permitting the child to gratify itself at will. This is, perhaps, the most universal cause. A habit thus inaugurated in infancy, in a child, the victim by inheritance of a strongly animal nature, becomes in adult life a moral necessity by a specious manner of subjective argument. The original concept was never wrong, because almost co-eval with the child. The adult conception which, in a healthy mind, would have demonstrated the moral and physicals in of the act, has never obtained, because the false mental view formed in childhood, which saw no sin in the habit, but rather a strong defense against the actual commission of fornication, has grown each year more strong, until, by repetition, a lie seems to be the truth, and this mental aberration will be confirmed by a consciousness equally stunted in growth. The woman whose moral nature has been warped from the earliest days, will argue to herself, that there is no possible harm in masturbation, but that it keeps her from being unduly familiar with men.

Again, some women are the victims, from birth, of a highly sensitive and hyperesthetic nervous temperament, and the least exciting cause is sufficient to upset them completely; with them masturbation is a disease of the nervous system, and should be treated as such. The persistent contemplation of a subjective state of mind, becomes objec-

tively a cause of masturbation. This state of mind may be engendered by a course of pernicious reading, and when dwelt upon exceedingly, creates the longing that is consummated in self-abuse. The sensualism of a civilization characterized by the luxuriousness of wealth, has done more to lower a high moral tone among women than any other factor I know of. Apart from the richly seasoned condiments of the table, that stimulate every function; apart from the soft sensuousness of perfumed apartments, thickly covered with softest carpets and draped with richest hangings; apart from the warm rooms and late hours, there pervades society in all its ramifications a license of speech, of dress and of intercourse, which tends to break down the barrier of reserve which a modest maiden never forgets. The books that are read, the plays and operas that are listened to, the dresses that are tolerated, and the dances that are indulged in, are highly conducive to uterine congestion.

Dr. Goodell has so ably exposed the harm of long engagements that I need not dwell upon this point.

Of physical causes in the child, perhaps the most frequent is the seat-worm. Ascarides, together with a want of cleanliness, set up an irritation that is only relieved by friction. In adult life, we have, as frequent irritants, pruritus vulvæ, congestion of the ovaries, ichorous discharges from the vagina, erosions of the cervix, and an elongated clitoris. Cerebro-spinal irritation is another cause which may not be lost sight of. The sexual desire seems to be more marked in certain temperaments than in others, especially in thin, sallow, nervous women.

Of the treatment little need be said. The cause, if physical, must be alleviated. The system must be built up by tonics, and the nerves quieted by bromides. An unusually elongated clitoris should be amputated, and in certain conditions oöphorectomy is indicated. The moral surroundings of the patient must be looked to. She should be instructed, intelligently, as to her condition, and should be removed from all associations and surroundings that aggravate the case. She should be brought into intimate communion with pure, strong minds, and should have the benefit of a bracing climate, with rigorous out-of-door exercise. She should also be interested in some occupation or employment that will amuse her, and should take up a course of reading that will elevate her mind. At such a time as is possible, she should marry and have natural sexual gratification.

Many cases are hopelessly incurable. The will has become so weakened that chronic insanity results. In others, there is a moral insanity in regard to the pure relationship of the male and female, though in every other particular the woman is perfectly sane. The general cultivation of a higher relationship among the sexes, the dissemination of sound physiological knowledge, not calculated to pander to corrupt tastes, and the purification of social habits and customs are, after all, the most potent medicines in the treatment of this habit, so disastrous in its results, so subversive of physical and moral life, and so prevalent among girls.

Suffolk District Medical Society.

Dr. Hamilton Osgood read a paper on

INVETERATE HEADACHE.

The common, the non-perilous, ailments of our patients are apt to be superficially treated. Headache is a plague to an indolent medical man. He regards it as of little moment, and treats it accordingly. To the patient, however, the ailment is a serious matter, depriving him as it does of power in practical life, of enjoyment of vacation, of comfort at home. It entails annoyance to others, for it renders the sufferer irritable, unjust and uncompanionable. If he be not relieved when he might be, the physician naturally deserves blame for an evil of wide extent.

Inveterate headache may be relieved by one or more of the scores of internal and external remedies, but these merely wither the fruit without touching the root of the evil. Indeed, the management of this affection is so empirical that it recalls Voltaire's reflection upon the practice of medicine, which, he said, consisted in "putting medicines, of which we know little, into a body of which we know nothing." No sooner does a form of treatment promise success in a patient, whose look and daily history indicate that at last the headaches have yielded, when, like a thunderclap, a new series of attack appears, and the course adopted and heretofore efficient becomes inert.

As an illustration: A lady, single, aged fifty-five, has suffered from intense headache since her youth. She has had every variety of treatment; has consulted many physicians. Remedies which on one occassion relieved her failed

utterly on another. Change of climate was extremely beneficial during one year. On returning to the same locality the following year her headache was incessant. She is known among her friends as a victim of pain, and has had every reason to feel profound discouragement. My first professional interview with her was during an attack of headache, in which, as is usual with her at such times, she seemed nearly unconscious from suffering. I was merely asked to relieve her by a subcutaneous injection of morphia, which I did, using one-half grain. Subsequently I was requested to take charge of the case. A careful examination gave me the following information: The patient was well nourished; appetite generally good; bowels in normal condition; her face showed the exhaustion caused by chronic pain; the menstrual periods (now passed) had always been regular, and, save that a headache was apt to follow them, free from annoyance of any nature. Her headache occasionally extended to the left side of the cranium, but was almost wholly confined to the right side, and never took the form of clavus. The onset of pain, however, was not peculiar to the menstrual epoch, but occurred irregularly at other times, and so frequently that the patient was never sure of being able to keep any engagement whatever. "Pain is the prayer of the nerve for healthy blood," says Romberg. During the thirty years of her experience of pain this lady has taken every sort of tonic and every variety of blood-making food. The wise adage, "Eat when you are hungry, but not so long as you are hungry," has been carefully observed, as have also the ordinary laws of health.

Sudden changes of weather have always given her great discomfort. This may be explained by Wright's computation to the effect that a change of one inch in the barometer increases or decreases the atmospheric pressure which the body of an average man sustains—by 1,080 pounds. "The results in periods of great weather fluctuations are headaches and even apoplexy." In my patient it is easy to imagine the painful effect of the abrupt oscillations in the circulation which would occur under such conditions.

The headaches I found to be invariably preceded by flushing of the right ear, the color deepening, as the pain appeared, to a livid hue. A little later the left ear became flushed, but never took on the darker color of the right. This anomaly in the circulation led me to examine the heart.

I found it free from organic lesion, but the first sound was weaker than the second, and both sounds, as well as the character of the heart's impulse, indicated lack of power in the cardiac muscle. This explained the temperature of the hands, which were invariably cold, and caused me to suspect that the lividity of the right ear during an attack of pain, and the deeper co-existing color of the right face, as compared with that of the left, were due to weak heart and habitual lack of vaso-motor energy in the blood-vessels of the right side of the head. This, I argued, was a logical accompaniment of the persistence of pain in this side, and probably showed a chronic dilatation, or at any rate weakness in the walls of the vessels of the right side, and which became apparent whenever the irritation of pain reflexively lessened the energy of the heart. During an attack, I further argued, these vessels probably dilated, and since "vessels of the brain are not supported by pressure of surrounding elastic muscles, and have, moreover, a less powerful construction than have blood-vessels elsewhere," this temporary dilation of weakened vessels created a local obstacle to the onward flow of the blood, and hence the increasing deeper hue of the visible tissues of this as compared with the left side of the head and face.

The stagnation of the blood-current is naturally followed by an accumulation of carbonic acid, and, in consequence, by an exacerbation of pain. A good illustration of this local condition of the circulation may be seen in the purple outlines of the bood-vessels of a drunkard's nose. Here the vaso-motor energy is permanently deadened by alcohol, and we see the constant presence of carbonic acid. In the patient in question, however, the local impurity of blood disappears as soon as the pain and its reflex effects upon the heart cease.

In behalf of my theory allow me to digress for a moment in order to relate the most striking instance of neurotic reflex which has ever come to my notice. Some years ago I was called to a lady who was suffering from severe pain in the right ear. I had frequently relieved this ear of large masses of wax, and the patient rightly suspecting the cause of the pain, had vainly tried to clear the ear in the usual way. When I reached her house the lady told me she was also in great discomfort from a delayed menstrual period now eight days overdue. It required fifteen minutes of time and copious injections of warm water to free the patient's

ear from a very large mass of cerumen. The relief was immense, and, moreover, before I left the house the *period had appeared.*

It is not strange, then, that great pain in the head reflexively will lessen the power of the heart, and I feel very confident of the correctness of my argument in the case in question. After writing the foregoing, I happened to find in Anstie's clever book on neuralgia the following remark: "Muscular viscera which are composed of unstriped fibre, like the intestines, or of a mixture of striped and unstriped, like the heart, are probably very liable to a secondary paralytic influence from certain special neuralgia."

Still I was no nearer to a discovery of the original *cause* of the headaches. As to the quality of the pain I may safely repeat Begbie's words in relation to a similar case quoted by Day, in his book on headache: "It was not nervous, nor hysterical; it was not inflammatory, nor congestive; it was not anemic; it was not dyspeptic; it was not of a rheumatic, nor of neuralgic character; it was not periostitic; it was not periodic." Finally, something in the general look of the patient, nothing positive, there being no especial symptom which could be named, suggested gout. The patient denied all knowledge of any case of this ailment in her family, but a careful inquiry into the family history revealed the fact that in several of her ancestors gout had existed. I at once determined to test this possibility, and took with me a quantity of the patient's urine for examination.

Previously, however, I ordered tincture of strophanthus in doses of four drops, which I subsequently increased to eight drops, three times daily. I may say here that even before I adopted any other form of treatment, so soon as the cardiac tonic began to show its effect in a relatively stronger first sound of the heart, the headaches became less intense in character, the discoloration of the right ear appeared less frequently, and when it did appear, was far lighter in hue. This was the first proof that the headaches were partially due to weak heart.

In examining the urine, I did not make a quantitative analysis for the uric acid present, but did find the fluid intensely and unusually acid, and that the specific gravity was 1034. This, in the absence of albumen and sugar, convinced me in my suspicion of the existence in the patient of a gouty tendency.

[In a lecture upon gout, Trousseau relates a case of headache which puzzled him extremely. This was in the early days of his practice. After a long period of doubt and insufficient treatment, the case was cleared up by a frank onset of gout, in reference to which Trousseau makes the interesting remark: "I did not then know that *gout* and *migraine are sisters.*"—*Clinique Médicale*, Vol. III.]

Prescribing the bicarbonate of soda in scruple doses three times daily, the urine soon became moderately acid, the specific gravity fell to 1024 and during the following six months not only did the headaches become very infrequent, but when they appeared the pain, save in two instances, was not acute.

Meanwhile, under alternate use of the tinctures of strophanthus and digitalis, the circulation of my patient had improved to such a degree that the hands and feet became habitually warm, her face lost its expression of exhaustion, her eyes brightened and the looked years younger than when I first saw her. This change corresponded with a steadily increasing power in the first sound of the heart, which was now stronger than the second sound. During this interval I substituted Buffalo lithia water (spring No. 2) for the soda, and the patient became more comfortable than she had been for several years, only two headaches of moment occurring during these six months.

This period of truce was then suddenly interrupted by onset after onset of intense headache, which, however, to my great relief, I soon found had their origin in the suppurating pulp of a molar tooth, so that they did not disturb my diagnosis of gouty headache. The tooth was soon relieved, but the cranial pain held on. Antipyrin quieted the headache, but caused unbearable nausea.

Just then appeared in *La Semaine Médicale*, Germain Seé's recommendation to give with antipyrin an equal bulk of this bicarbonate of soda as a certain means of avoiding nausea. This proved a success and disposed of all tendency to nausea in this case, as also in several other cases. In the patient in question, however, the drug soon became inert. The caffeine, bromo-caffeine, likewise guarana, of which caffeine is the active principle, were never of any use to her. Cannabis indica is perfectly negative, and the patient is so annoyingly familiar with every other known remedy for headache, and the inefficacy of all of these, that, in her paroxysms of pain, you will not wonder, notwithstanding I

have a strong prejudice against the drug, that I have occasionally resorted to morphia, which, of course, relieves the pain, yet is invariably followed by severe vomiting. I did not try antifebrine because, by this time, I had lost faith in remedies of that sort for this patient.

When she came out of this storm, I found that the former effectual treatment by cardiac tonics and alkalies had utterly lost its power. This fact, together with absence of relief from medicines which benefit other forms of headache, still further convinced me that gout, and not neuralgia, was the root of the ailment, and I finally resorted to absolutely anti-arthritic treatment—wine of colchicum and iodide of potassium—the diet being carefully regulated. That I did not do so before, in view of my diagnosis, was due to my hope that the cardiac tonic and alkalies would prove effectual; as indeed they decidedly did for six months. Almost at once after beginning to take the remedies for gout the patient experienced a heretofore unknown sense of relief. Time is needed to prove that she has been wholly relieved of her suffering; but she is already in a condition of comfort to which she has long been a stranger, and although at times she is conscious of pain, it is so mild in character that she does not consider it of moment, and I hope it is due to nothing more than nerve-memory. Twice, weekly, I give her a strong secondary galvanic current. This is acting well as a nerve tonic and the patient is more vigorous in every sense. She is taking 18 drops of the wine of colchicum root and 8 grains of the potash, three times daily.

A prominent feature in the symptoms of this case has been the weak heart, careful stimulation of which contributed largely to the well-being of my patient during the six months of almost entire freedom from severe pain.

This point merits especial mention. I believe we neglect the heart in many cases in which, if this organ were stimulated patients would sooner reach a condition of comfort. In the patient in question—notwithstanding she has been a victim of pain for thirty years, during which she has received such a variety of treatment that it is difficult to name a remedy with which she is not familiar, and in spite of having passed through the hands of very many physicians—her heart has never before been carefully examined nor directly treated.

Dr. E. G. Cutler said: I was much interested in the first case that Dr. Osgood read. After he spoke to me about the case, in looking for some cases I found that I had nothing of my own, and I found in the library, in the last Report of St. Bartholomew's Hospital, a collection of fourteen cases not unlike those of Dr. Osgood. It is a paper written subsequent to another published several years ago, of cases in which was found a large increase in the uric acid in the urine, the chief symptom being that of headache. The histories of these cases always show the existence of gout or some such affection in some member of the family, and the headache usually was periodical, either lasting for a long time, or coming on at irregular intervals, perhaps of days or hours, or weeks or months, and lasting for years. The treatment which was found most successful, I believe, was that of a diet in which there was a great diminution in the nitrogenous matter, a diet largely liquid-farinacious; and also the treatment by hydrochloric acid. It was found by experiments, which have apparently not been disproved, that under the treatment with hydrochloric acid the amount of uric acid dimininished, and with alkalies it increased, and it was found that at the same time this symptom of headache would be done away with more effectually than by any other means. This article is a very interesting one, and I have not seen that it has been contradicted.

Dr. Putnam: Dr. Osgood's paper calls to one's mind a large number of very interesting points, and of course it would be impossible to do any thing like discuss them all. That there is such a thing as gouty headache, in the sense that the word "gouty" is commonly used in this country, as indicating in the most general way a disorder of the assimilation and nutrition, I suppose there can be little doubt. That is to say, that this is one of the many neurotic symptoms which are met with under these circumstances in what is called lithæmia, which is the nearest approach to gout which we have, except in special cases. I think it is difficult to determine, however, that the lithæmic condition acts as a cause of the nervous syptom. In regard to the relation of the heart to headache, I suppose that we might do a good deal more that many of us do in the therapeutics of general diseases by stimulating the heart; although I think it is very hard to say many times whether the heart-sounds are a little weak or not, and that

unless one examines with great care and many times and both before and after treatment, it would be very easy to attribute to the cardiac remedy a result which really belonged to something else.

So far as the occipital headaches are concerned, I feel pretty sure, with regard to some varieties of them, that they do not arise from the heart. I have seen a large number of these headaches, as every one must have who has to do with nervous diseases, because they seem to be extremely common, in connection, largely, with overwork, in persons otherwise in good health. I have, to be sure, under my care at present, a lady who suffers greatly from this headache, which continues in spite of an improvement in her general health, and she has heart disease. On the other hand, I have treated for a long time a gentleman who prides himself on his vigor and his muscle, and he has had this headache for a very long time also, though not in a severe form; but in his case it has disappeared, apparently without any one being able to say why. At one time he thought that massage helped him and at another time electricity. He has never presented any signs of weakness of the heart. Of course I do not mean to imply that Dr. Osgood claims that all cases are due to that cause.

Another cause of occipital headache which should be borne in mind is one which Dr. Seguin called attention to some time ago, and that is uræmic. I have recently had a patient, a lady with chronic Bright's disease, in whose case this symptom has been present. In regard to the flushing of the ears, as occurring in these headaches, as a sign of cardiac disease, I must say that I can not agree with Dr. Osgood. I think it is well known that flushing or paleness of ears or face is a very common one in migraine. Writers have been divided as to how much influence is to be attributed to alterations in the vascular supply or sensitive membranes as a cause of the pain, or whether the pain may be due to spasm or dilatation of the vessel itself; and for my part I am of the opinion that it is only a concomitant symptom as a rule; it is common to see cases of typical migraine without any such changes that we can see, and again, vascular changes occur so often in other neuralgias that it seems to me on the whole that the fairest way of looking at it is as a concomitant symptom, and not, as a rule, a cause of the pain.

Report of a Case of Fecal Accumulation and Consequent Obstruction Following Laparotomy.

BY CHARLES B. PENROSE, PH.D., M.D., PHILADELPHIA.

THE following case is reported because it serves to illustrate the danger of permitting the bowels to become constipated immediately after an intra-peritoneal operation. F. L., aged 35. A small, weak, anæmic woman, with lateral spinal curvature and deformed pelvis. Had one child three years ago at seven months, premature labor having been induced by Dr. Bernardy, on account of the pelvic deformity.

She was operated upon by the writer, at the Gynecean Hospital, Feb. 18, 1888, for the removal of a small ovarian cyst on the right side.

The operation was simple, and the convalescence very easy. The bowels were moved by enema on the third day, and after that regularly every one or two days, until the fifteenth day after operation, when she was allowed to get out of bed, and ceased to be under strict medical supervision. She then became constipated, and neglected to call the attention of the nurse or medical attendant to the condition of her bowels until eight days had passed without her having an evacuation.

She then presented the following symptoms: Tongue pasty, white on edges, black in centre; pulse 120; temperature 101°. There was continual nausea and occasional vomiting. She suffered from attacks of tenesmus following the discharge, by rectum, of small quantities of blood-streaked mucus. No feces were passed. There was very slight abdominal distension and tympany, and no general abdominal pain. Lying immediately under the parietes and to the right of the scar of the abdominal incision was a very tender movable mass, about the size of a child's head. The consistency of the mass could not be determined by palpation on account of the great tenderness.

The diagnosis of fecal impaction, probably in a mass of adherent intestines, was made, and she was treated with frequently repeated small doses of calomel and large rectal injections of warm water administered in the knee-chest position. During the first two days of this treatment many small, hard lumps of feces were discharged, and the abdom-

inal tumor became less tender and diminished in size. The discharge of mucus and the tenesmus also diminished. On the third day, the bowels began to move of themselves, there being six or eight, large naturally formed movements daily for three or four days. The abdominal tumor rapidly decreased in size, and had disappeared by the eighth day after it had first been observed.

The further convalescence was uneventful.

The tendency to constipation, accumulation of feces and consequent intestinal obstruction, which follows laparotomy, and which was so marked in the case just recorded, is in most instances due to slight peritoneal adhesions which occur between loops of intestine. These adhesions, by matting together segments of bowel, not only interfere with proper peristaltic motion, but also favor the production of sharp flexures or kinks, which seriously impede the flow of the intestinal contents.

In most cases of abdominal section, few, if any, intestinal adhesions occur. The most frequent position of these adhesions is along the line of incision, or to the pedicle of a tumor. Adhesions to the incision are, to a great extent, excluded if the omentum is swept well down before closing the abdominal wound; and, if the bowels are kept freely moved from the second or third day after operation, any adhesions which have formed, either to the abdominal wound or between loops of intestine, will probably be broken up.

In other cases of abdominal section, however, where there has been much exposure or irritation of the peritoneum, some local, if not general, adhesive peritonitis is very common, and the consequent matting together of loops of intestine is the cause of subsequent trouble. The practice of free abdominal irrigation before closing the incision in such cases does much toward preventing these adhesions. But, after this irrigation the usual procedure of sponging dry the peritoneum is to be avoided.

Such sponging is not only unnecessary, but it is often deleterious; the irritated peritoneal surfaces being more likely to adhere when dry and in close contact, than when surrounded by an unirritating fluid. For this reason, it is best in such cases to make no final sponging, but to leave a quantity of clean water in the abdomen when the incision is closed. The quantity of water which can be thus left

depends altogether upon the rigidity of the parietes and the condition of the intestines as regards distension.

In all cases, the early administration of purgatives, and their continued use, if necessary, after the patient is out of bed, will tend to prevent and to overcome this form of intestinal obstruction, which is not an uncommon sequel of laparotomy.—*Medical and Surgical Reporter.*

Venereal Diseases.

THE THERAPEUTICS OF CIRCUMCISION.

An elongated and tight prepuce is answerable, as is well known, for many disadvantageous conditions, which are happily remediable by adopting the simple plan of removing the redundant adjunct to an otherwise perfect organ. This mutilation, if such it may be called, is, therefore oftentimes essential for the well being of the child or the adult; and apart also from the immediate cause which may happen to have led to its adoption, it is in every sense of the word always a hygienic procedure. In a recent number of the *Revue Médicale, de la Suisse Romande*, Reverdin has published a useful article which bears upon this question. He quotes an American authority, Adams, who recommends circumcision in the case of children who suffer from nocturnal incontinence of urine, in whom this symptom can be attributed to no other cause. The same authority affirms that symptoms of coxalgia are sometimes produced by phimosis, relief from which is readily to be obtained by performing circumcision. Reverdin relates a case which supports this opinion. A child, aged nine, suffered for several weeks from signs of hip-joint disease. The case was diagnosed as one of this description, and the patient was confined to bed for five months, and extension applied. At the end of this period his condition was in no way improved. At this time, however, it was noticed that the prepuce was elongated and tight, for which circumcision was performed, and all the symptoms vanished at the end of three days. A year subsequently to the operation, the patient was quite well, and had not suffered from any recurrence. Reverdin observes that he has noticed circumcision to produce a notable amelioration in the physical state of a young hypochondriacal man, who had even attempted suicide. Cases of

epilepsy seem also to be much relieved in certain instances by the operation for phimosis, and the same may be said of chorea and other nerve affections. The close connection, again, which exists between hernia and phymosis in infants is generally admitted, and is frequently to be seen in the outpatients of hospitals.—*Medical Press.*

Microscopy.

NEW METHOD OF STAINING SECTIONS OF THE CENTRAL NERVOUS SYSTEM.—Pal, of Vienna (*British Medical Journal*, March, 1888), claims for the following method, originated by him, the advantages of greater distinctness in defining elements, separate staining of nerve cells and nuclei, greater speed, and abolishment of necessity for treatment of sections with cupric acetat. solution.

Portions of cord or brain are hardened in Müller's fluid in the ordinary way. Make a three-quarter per cent. solution in water of hæmotoxylon, with the aid of heat. Add alcohol after cooling. This solution does not keep long, and must not be exposed to sunlight.

Just before using the hæmotoxylon solution add to it a solution of lithium carbonate in proportion of three or four drops of the latter to ten cc. of the former. This causes the solution to assume a violet-red hue.

Paraffin secretions cut in absolute alcohol are stained in the above for five or six hours, an then washed in water until all color ceases to come away.

The sections are next to be "differentiated" by immersion for fifteen or twenty seconds in a quarter per cent. solution potass. permanganate, and then for a short time in Pal's solution, until the white and gray matters are plainly defined —generally in two or three minutes. This process must be repeated if the white and gray matters are indistinct, or black specks are seen on the sections.

Pal's solution:

℞. Acid Oxalic, . . . part 1.
Potassium Sulphid. (K_2SO_3), " 1.
Aqua Distillat., . . " 200.
M.

Sections are thoroughly washed in water after removal from Pal's solution, and the nuclei then stained in alum-

carmine or eosine, preferably the carmine. Again wash in water, dehydrate in absolute alcohol, clear in clove oil or creosote, mount in balsam.

In sections so treated, medullated nerve fibers stand out blue and sharply on a white background, presenting strong contrast to the red nuclei.

To bring out nerve cells prominently, place sections after "differentiating" into a slightly alkaline picro-carmine, staining the nuclei as before in alum-carmine, after washing in water.—*Brooklyn Medical Journal.*

MICRO-ORGANISMS OF THE MALE URETHRA AND OF NORMAL URINE.—Lustgarten and Manneberg (*Vierteljahrschrift f. Dermat. und Syph., cit. Am. Jour. Med. Sci.*, April, 1888), by means of a sterilized platinum spoon, remove portions of secretion of mucosa of the normal urethra.

Many varieties of bacteria were found, and amongst them two of particular diagnostic importance. One was a bacillus morphologically identical with B. Tuberculosis, the other a diplococcus not to be differentiated from Neisser's gonoccus. The bearing of this discovery on examinations of urine, in cases suspected of either of the above diseases, is evident. The authors, after experimenting, recommend catherterization with a sterilized catheter.

The same authors found that the urine in three cases of acute Bright's, drawn in sterilized vessels with proper precautions, contained quantities of a streptococcus which appeared either in the form of long chains of twenty to thirty cocci or as zoöglea balls. The microbes diminished with defervescence, increasing with each exascerbation, and they incline to the belief in their ætiological relation to this disease.

MICRO-ORGANISMS IN THE STOMACH OF INFANTS.—Dr. M. D. Van Puteren (*Vrach. Lancet*, July 7), finds that during the first two months of life the microbes existing in the stomach are very various, no single form being constant. Their presence must therefore be merely accidental. The number of microbes in the stomach is always in direct proportion to that of those existing in the mouth at the same time; consequently, by means of a micro-biological examination of the mouth, the condition of the stomach may be pretty accurately inferred. It is evident, therefore, that the way to prevent the access of micro-organisms into the stom-

ach is to exclude them from the mouth. It must also be remembered that the stomach in such young infants, containing much less acid than it does in older persons, presents a decidedly favorable field for the development and multiplication of micro-organisms.

The Bacillus of Duck Cholera.—The correspondent of the *Lancet*, July 7, says: "An epidemic lately broke out among the ducks of the Jardin d' Acclimatation, when more than eighty of them succumbed in a few days. Prof. Cornil, after having established that the alimentation was the source of the malady, searched for and cultivated the pathogenic microbe. He found in the blood of the ducks which died a very small bacillus, the culture of which on gelatine is identical with that of the microbe of the cholera of fowls described by M. Pasteur. The anatomical lesions are also the same as the alterations produced by this microbe; and yet, observes M. Cornil, this malady of the ducks is not at all the cholera of fowls, as the bacillus inoculated kills only ducks. It is inoffensive for fowls, pigeons and rabbits, which, on the contrary, rapidly succumb after the inoculation of the choleraic microbe."

Gleanings.

The Diagnosis of Carcinoma of the Stomach.—The author (Rosenbach, *Centralblatt f. Klin. Med.*, 1887, *cit. Am. Jour. Med. Sci.* February, 1888), is opposed to the views of Riegel regarding the diagnostic value of hydrochloric acid in determining gastric carcinoma. He has repeatedly found it in stomachs which have proved to be carcinomatous at the autopsy table.

The presence of hydrochloric acid in the gastric secretions, he believes, depends on the chemical nature of the food ingested and the time, after ingestion of food, of testing for the acid. Failure to detect acid five or six hours after eating may be followed by success two to four hours later.

An abundant amount of acid may be due, he believes, to the action of a normal stomach or of a pathological stomach, and in different cases different conclusions are to be drawn from the same degree of acidity.

Dilatation of the stomach from any cause may lead to

hypersecretion of acid; and pyloric stenosis, the result of carcinoma, is a frequent cause of this condition.

The condition of the peptic strength he shows to be of practically no value, and suggests, as a better test of the digestive capacity of the gastic secretions, the determination of the presence of peptones. Finding peptones, the time of ingestion and intensity of peptone reaction, will prove valuable factors in drawing conclusions, both diagnostic and therapeutic, concerning the condition of the gastric secretions. Rosenbach has rarely failed to find peptone, by the biuret process, in carcinoma, and then only toward the termination of the disease.

Toxicity of Pyrexial Sweat.—In a paper read before the R. Accad. Med. di Genova, Prof. G. B. Queirolo gives the results of some experiments on rabbits which he inoculated with the sweat of patients suffering from various fevers (small-pox, ague, articular rheumatism, pneumonia, etc.). The sweat was always collected and kept under the same conditions, the reaction being neutral and the specific gravity about 1006. All the rabbits into which sufficient doses of "pyrexial" secretion were injected died in from two to forty-eight hours; while the others, into which an equal or larger amount of healthy sweat was injected, were not affected in any way whatever. The former died without showing any rise of temperature, and not one of the known signs of septic infection was discovered; the spleen was not enlarged, and in only a few cases was there some scanty serous or sero-sanguinolent effusion in the peritoneal cavity. Prof. Queirolo urges that diaphoresis should be encouraged by every means in our power, particularly by making the patients drink large quantities of liquid, whereby the poisonous matters produced by the infecting virus may be, as it were, washed out of the organism.—*British Medical Journal.*

Phthisis Treated by Tannin.—Dr. C. DeViti-Demarco recommends (*Riforma Med.*, *B. M. J.*, July 7), "saturation of the blood with tannin" as an effectual means of checking the development of the tubercle bacillus, and giving the organism time to eliminate it. He has treated two patients by giving: ℞. Acid. tannic., grains 60; creosote, m. ii; glycerine and alcohol, āā *q. s.* To make eight pills; one to be taken every two hours during the day. In both cases the temperature became normal after twelve days' treat-

ment, and remained so; the condition of the lungs, however, was unchanged. One of the patients, who was hopelessly ill when the treatment was begun, died in a month, but the other, though having a large cavity in each apex and extensive tubercular deposits in the left lung, was "immensely improved" after three months, having gained weight and almost lost his cough, while the expectoration was diminished to half what it had been. The prolonged administration of tannin had caused no ill effect. [Raymond and Arthaud reported good results with 30 to 60 grains of tannin daily.—*N. Y. Med. Abstract*, p. 421, 1886.]

Continued Irrigation for Wounds.—There is in the London Hospital a large tank fixed in the wall supplied with hot and cold water by pipes; a window in its side shows the level of the water and exposes a thermometer by which the temperature of the water is adjusted; from the tank irrigating tubes pass to various beds, and after being used for irrigation, the water is drained off by a pipe which passes into the basement. Two patients are at present under treatment by this method; in one case a stream of water has been running over a severe wound of the elbow, produced by a crush, day and night without intermission for nearly three months, and the large wound is nearly healed. In the other case the wound, a severe crush of the hand with loss of much skin, compound fracture of several bones and exposure of some carpal joints, is also doing well.

The Poisonous Effect of Cigarette Smoking.—Once more the subject of cigarette smoking and its effect are made the subject of elaborated experiment. Dr. Wm. L. Dudley (*Medical News*, Sept. 5th, 1888) has made careful test with cigarettes, cigars and pipes, and from the study on the lower animals concludes that the poisonous effect of the cigarette smoke when inhaled is the principal cause of the poisonous result. He thinks that inhaling smoke from a pipe or cigar would produce exactly the same injurious results. The poisonous element in the smoke is the carbon monoxide which is so extremely poisonous because it has such a strong affinity for the hæmoglobin of the blood. This seems to be the clearest piece of work on cigarette smoking yet brought before the public and may help many a physician to explain to fond parents and interrogating sons exactly why cigarette smoking is harmful, without

blaming the brand of cigarette. Dr. Dudley's conclusions, as drawn from his experiments, are as follows:

1. That carbonic oxide is the most poisonous constituent of tobacco smoke.

2. That more injury results from cigarette than cigar or pipe smoking because, as a rule, the smoke of the former is inhaled.

3. That cigarette smoking without inhaling is no more injurious than pipe or cigar smoking.

4. That the smoke of a cigar or pipe, if inhaled, is as injurious as cigarette smoke inhaled.

5. That the smoke from a Turkish pipe, if inhaled, is as injurious as that of a cigarette inhaled.—*Maryland Medical Journal.*

HEMORRHAGE FROM THE PALM.—My experience with hemorrhage from wounds of the palmar arches is that it is usually controliable by maintaining extreme elevation of the hand. This is most throughly effected, and with the least discomfort to the patient, by vertical suspension of the limb, the attachment being made along the palmar and dorsal surfaces of the forearm by adhesive strips, after the ordinary manner of making extension in the treatment of fractures. A cord from the adhesive straps may be fastened to the top of a bed post, or other convenient elevated point.

If posture alone should not arrest the hemorrhage, the most effective compression can be made by placing in the palm of the hand an india-rubber ball, or a ball solidly made of cotton wadding, and on this the fingers and thumb should be closed and bound tightly with a roller bandage.

Using these expedients I have never been obliged to ligate arterial trunks for the arrest of hemorrhage from the palm of the hand.—*Medical and Surgical Reporter, Dr. R. J. Levis.*

VARICOCELE IN THE FEMALE: WHAT IS ITS INFLUENCE ON THE OVARY?—Dr. Palmer Dudley sums up an article on the above subject (*New York Medical Journal*) with these conclusions:

1. It is my belief that varicocele in the broad ligament is not a rare condition.

2. That it is produced by long-continued congestion; arrest of uterine involution, from whatever cause, and

chronic constipation being the most important factors in its production.

3. That it may exist and be mistaken for so-called cellulitis or salpingitis unless careful rectal examination of the broad ligament is made.

4. That it will produce changes in the structure and function of the ovary similar to those produced in the testicle, causing atrophy of its stroma, and interference with the proper development of the ova to such an extent as to produce cystic degeneration of it and consequent sterility.

5. That when the varicocele has existed for some time, or for a sufficient length of time to have caused a permanent dilatation of the veins, local treatment by counter-irritation (with Churchill's tincture of iodine), cotton tamponing, pessary support, or local depletion will be of no permanent benefit.

6. That the result of a radical operation for its removal in the four cases reported, although not sufficient to make the operation a justifiable one in all cases, is strong evidence in its favor, even though the woman has passed the menopause.

TREATMENT OF CARBUNCLE.—I have tried the expectant treatment of carbuncle recommended by Paget; but find it so long, tedious and painful to my patients that I have completely discarded it. The treatment by excision and scraping is too severe to be generally adopted in private practice, although it has been apparently very successful.

I have adopted the following for the last three years, to which I have added the hypodermic injection of cocaine. I inject into the carbuncle hypodermically half a grain of hydrochlorate of cocaine, and wait about five minutes until the skin is quite anesthetic; then I make a small incision into the center of the carbuncle with a tenotomy knife, and insert a small, sharp piece of potassa fusa, and then push it home. Afterward a piece of belladonna plaster is cut circular, a little larger than the carbuncle, and placed over it. The plaster serves the double purpose of retaining the caustic and of alleviating the pain. This is kept on for eight hours, and then it is taken off, and hot linseed poultices are applied for the same length of time. The result is that the patient always recovers about three days after the commencement of the treatment, which in this way is carried out almost painlessly.—*British Medical Journal.*

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

CORRECTION.

September number of this journal, page 601: "The Fever of *Overfeeding.*" In place of overfeeding read EXCESSIVE EXERCISE.

On page 602. "The examination of the urine is, in all cases of *overfeeding*, * * ." Read, EXCESSIVE EXERCISE.

Book Notices.

THERAPEUTICS: ITS PRINCIPLES AND PRACTICE. By H. C. Wood, M.D., LLD., Professor of Materia Medica and Therapeutics, and Clinical Professor of Diseases of the Nervous System in the University of Pennsylvania. A Work of Medical Agencies, Drugs and Poisons, with Especial Reference to the Relations between Physiology and Clinical Medicine. The Seventh Edition of a Treatise on Therapeutics, Rearranged, Rewritten and Enlarged. 8vo., pp. 908. Cloth. Philadelphia: J. B. Lippincott & Co. Cincinnati: R. Clarke & Co.

This work has met with unusual success as a text-book upon therapeutics, having reached a seventh edition. When it is considered how very many works have recently been published upon the same subject, not a few of them of great merit, it is strong evidence that the volume before us is held in the highest esteem when, after six editions have been exhausted, a seventh one is called for. We have known, however, from the time that Dr. Wood's work first made its appearance, before we had seen a copy of it, that it was regarded as possessing great value. He is held to be a close and accurate observer and original thinker, and consequently his book is not considered a mere compilation from the writings of others, though, of course, it contains the results of the researches of others engaged in the same field of investigation.

The author has bestowed much labor on this, the seventh, edition of his work on therapeutics. He states that he carefully studied nearly six hundred memoirs. What was

formerly the second portion of the book has been made the first, the scope of it being greatly extended so as to take into consideration, besides various miscellaneous immediate measures, massage, metallotheropy, the feeding of the sick and the dietetic and general treatment of underlying bodily constitutional states or diatheses, such as exhaustion, obesity and lithiasis. The portion devoted to the study of drugs has been rearranged in accordance with a new classification, which is more simple than the one previously employed. All new drugs, as hydrastin, strophanthus, sparteine, ichthyos, urethan, hypnone, etc., have been carefully considered, while many articles upon older drugs, such as cocaine, antifebrin and caffine have been carefully rewritten.

In consequence of the careful revision it has undergone, much new matter having been added, and having been brought fully abreast of the present state of therapeutical knowledge, the work will no doubt be more acceptable than ever to medical students and physicians.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES. A Yearly Report of the Progress of the General Sanitary Sciences Throughout the World. Edited by Charles E. Sajous, M.D., Lecturer on Laryngology and Rhinology in Jefferson Medical College, Philadelphia, etc., and Seventy Associate Editors, Assisted by over Two Hundred Corresponding Editors, Collaborators and Correspondents. Illustrated with Chromo-Lithographs, Engravings and Maps. 1888. Five Volumes, 8vo., about 600 pages to each Volume. Cloth. Philadelphia and London: F. A. Davis.

The object of the ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES is to collate the progressive features of medical literature at large, and clinical data from countries in which no literature exists, and to present the whole once a year in a continued form, prepared by writers of known ability. As such it is expected to become a helpmate to the practitioner in his efforts to relieve suffering, and to assist the investigator by correlating facts, thus enabling him to better compare.

Our space is too limited in the present issue to give this work the notice it deserves. As the title indicates, it is the intention by the work to present each year a report of the progress of medicine in all its different departments. This

will be done by the preparation of articles for the work; and by the seventy assistant editors, and the numerous corresponding editors and collaborators collecting all the medical literature of the year throughout the world where scientific medicine is cultivated. Such a work can not but be of great value, and every intelligent practitioner should subscribe for it.

Volume I. treats of Diseases of the Brain and Spinal Cord; Diseases of the Peripheral Nervous System; Diseases of the Heart and Pericardium; Fevers; Diseases of the Mouth, Stomach, Pancreas, and Liver; Diseases of the Intestines and Peritoneum; Intestinal and other Parasites, etc.

THE MEDICAL AND SURGICAL HISTORY OF THE WAR OF THE REBELLION, Part III., Volume I., Medical History. Being the Third Medical Volume. Prepared Under the Direction of the Surgeon-General, United States Army. By Charles Smart, Major and Surgeon, United States Army. Quarto. Pp. 989. Washington: Government Printing Office. 1888.

We are indebted to the courtesy of the Surgeon-General of the United States Army for this magnificent volume—a work that not only the medical profession of this country should take a pride in, but the medical profession of the civilized world.

The *first part* of this work, published in 1870, consisted of a consolidation, by departments and regions, of the monthly reports of sick and wounded of the various regimental organizations, with appended extracts from special reports of medical officers, giving a view, from the medical standpoint, of the movements of our armies and the many deadly struggles that took place between the opposed forces. The *second part*, published in 1879, was devoted to a thorough discussion of the alvine fluxes, based on the materials, documentary and anatomical, collected by our medical officers during the war. The distinguished author, microscopist and pathologist, Dr. J. J. Woodward, had charge of this *part*, and that fact is sufficient evidence of its very great value. Dr. Woodward, while preparing it, had charge of the Army Medical Museum, and his intimate familiarity with the vast material contained in it, and the enthusiasm, as has well been said, with which he prosecuted their study, peculiarly fitted him for the work of laying before the pro-

fession the results of that study. Failing health and, ultimately, death, however, prevented the further progress of the work by the mind and hand that had conducted it thus far.

In 1883, the late Surgeon-General Crane induced Dr. Charles Smart, Major and Surgeon, U. S. A., to undertake the *third part* of the work. No conditions, were imposed as to the matter or manner of the volume, save that the valuable plates which Dr. Woodward had prepared, illustrative of the pathological changes in the intestinal tunics, should be embodied in the work.

To give our readers such a description of the immense volume, constituting the *third part* of the great work of the "Medical and Surgical History of the War of the Rebellion," so that they can fully appreciate its contents and its great value as a part of the medical history of the late war, would be quite impossible. We will state, however, that it treats only of the diseases which prevailed among the Federal armies from the beginning to the close of the war, and is not all concerned with surgical casualities. The first chapters are devoted to the consideration of *typhus*, *typhoid* and *common continued fevers*, *remittent fever* and *quotidian*, *tertian*, *quartan and congestive intermittent fevers* as they prevailed among the Union troops wherever they were situated over this vast country.

We consider that not only the profession of this country, but that also of the civilized world, is greatly indebted to the distinguished medical gentlemen composing the Surgeon-General's Office, U. S. A., for this most valuable work. Its like was never before prepared and issued. The labor that it has involved has been greater than is implied by the word immense. It has been incredible. Every medical man may well feel proud of it. It is not only an honor to the profession of this country but of the world.

A Manual of General Pathology, Designed as an Introduction to the Practice of Medicine. By Joseph Frank Payne, M.D., Oxon., F. R. C. T., Late Fellow of Magdalen Hospital, Oxford; Physician and Joint-Lecturer on Pathological Anatomy at St. Thomas' Hospital, etc. With One Hundred and Fifty-Three Illustrations. 8vo. Pp. 528 Cloth. Philadelphia:

Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, $3.50.

"Pathology," says the author, "is the science of disease; that is to say, the science which studies the human body in those conditions which it has been agreed to call diseased or morbid." "In order to define pathology it is then necessary to define disease: and in order to define disease, we must define health."

Defining is not an easy task. Every one is able to recognize disease when they meet with an example of it, as also health; but very few, however, without the greatest labor, can form a scientific definition of either that will express its conditions so that there will never be found any exceptions in any example that may be presented. The author says that by health is meant the maintenance of a living body in such a condition that neither the performance of its ordinary functions, nor any slight disturbance of them, interferes with the regular cause of its activity, or leaves it worse than before.

Pathology used to be but little studied in our medical schools. What knowledge students secured in regard to it was limited to a few facts incidentally mentioned by the teachers of anatomy, physiology, principles and practice of medicine, and therapeutics. But it affords us pleasure to know that now special instruction is given in this important branch of medicine in very many of the medical colleges. How it can be expected that students of medicine can be trained to become competent physicians without being taught the effects produced by disease upon the structure and functions of organs, we can not understand. It seems to us that the study of pathology should follow right along with that of physiology.

The work is well adapted for the use of students. It is little like the work of Wagner and other learned works upon pathology, which can only be of value to skilled microscopists and original investigators. It mingles general and special pathology together in such a manner, in its method of instructing students to become competent physicians, that it may be regarded as teaching the science of medicine—as setting forth the principles involved in the treatment of diseases.

The work is divided into Parts. In the first is taught what are termed the Processes of Disease. Among the

processes treated are Edema and Dropsy; Inflammation; Fever; Local Death—Necrosis and Gangrene; Degeneration, as Albuminous, Fatty, Colloid and other forms.

Part II. is devoted to the Causes of Disease, as Ferments; Septic and Cadaveric Poisoning—as Specific Morbid Poisons, etc. In the latter chapters of the Part there will be found treated the Bacteria. Schizomycetes, Micrococci, etc. The Bacillus of Tubercle is very fully described, as are also other Bacilli.

Medical students and practicing physicians, who have not the leisure for the thorough study of pathology, will find this an excellent work for the study of the leading facts of pathology, with reference to the causes of disease.

Disinfection and Disinfectants: Their Application and Use in the Prevention and Treatment of Disease, and in Public and Private Sanitation. By the Committee on Disinfectants, Appointed by the American Public Health Association. 8 vo. Pp. 266. Cloth. Concord, N. H.: Republican Health Association.

Disinfection and disinfectants are exciting great interest at the present time, and the question is frequently asked, Where can full information be had in regard to them? The volume before us is the result of the labors of the Committee on Disinfectants, appointed by the American Public Health Association in October, 1884. The committee continued its researches, investigations and experiments for three years, and made its final report in November, 1887.

Only by a careful study of this volume itself will the amount of work this committee performed, and its great value to the interests of health, be appreciated. The ability of the committee, composed of men all eminent in their profession, is a sufficient guarantee of the high character of this work. The original experimental investigations made by the committee are of the greatest importance and value and render this the most complete and practical volume upon disinfection and disinfectants yet published.

The work contains many wood engravings, exhibiting the appearance of the different morbid bacteria, bacilli, eccinocci, etc.

? Quiz Compends? No. 8. A Compend of the Diseases of the Eye; Including Refraction and Surgical Operations.

By L. Webster Fox, M.D., Ophthalmic Surgeon to the Germantown Hospital, late Clinical Assistant Ophthalmological Department, Jefferson Medical College Hospital, etc., and Geo. M. Gould, M.D. Second Edition. Revised and Enlarged, with 71 Illustrations. 12 mo. Pp. 164. Cloth. Philadelphia: T. Blakiston, Son & Co.; Cincinnati: R. Clarke & Co. Price, $1.00.

This is No. 8 of the series of "Quiz Compends" which have been published by the house of Messrs. P. Blakiston, Son & Co., of Philadelphia, and which, we understand, have met with general approval on the part of medical teachers and medical students. We have noticed the different numbers of the series of the Compends as they have from time to time been issued, and have described their general character.

The authors state that the volume before us is not intended for specialists. While this is so, yet it is certainly well adapted for those who are contemplating to become specialists in the treatment of the diseases of the eye. After having studied and become quite familiar with this Compend a student will be well prepared to take up one of the large, learned works upon the eye, designed for specialists, and master its contents with an ease which would have been quite impossible if he had been set to work at it at first. But the small volume will be found valuable, not only to students having in view to make the affections of the eye a specialty, but to all undergraduates.

The general practitioner will find in the work much information that, if he will take the trouble to acquire, will make him much more useful to his patient, even though he should continue to send all cases of affections of the eye, coming to his attention, to some oculist to be treated.

There is much in this small work highly interesting to every intelligent person, as the elucidation of refraction of the eye, the description of the ophthalmoscope, prescribing spectacles, the explanation of astigmatism and quite a number of other subjects. The work is fully abreast of the most recent knowledge upon all the subjects of which it treats.

Physicians' Interpreter in Four Languages. Specially Arranged for Diagnosis. By M. Von V. Philadelphia: F. A. Davis.

This is a little work of such size and shape as enables it easily to be carried in the pocket. The author, who only

gives us his initials, says that it has been written by one who, having had some hospital experience and being frequently called upon to interpret for foreigners, presents it to physicians and students with the hope that it may facilitate their intercourse with the suffering.

The four languages in which physicians are instructed to communicate with their patients are English, French, German and Italian. The plan is simple. The pages are divided into four parallel columns. At the beginning of each page is a row of English questions or expressions of some kind or other. In the second, third and fourth columns on the same lines, the same questions appear in French, German and Italian. We will give an example: In one of the English columns is the question, "Where have you pain?" On a line with this, in the French column, are the words, "*ou avez vous des douleurs?*" In the German column are the words, "*wo haben Sie Schmerzen?*" In the Italian, "*dove avete dolore?*"

We have no doubt but the little work will be of great service to many physicians who have large numbers of foreigners among their patrons who cannot speak English.

A Text-book of Human Physiology. By Austin Flint, M.D., LL.D., Professor of Physiology and Physiological Anatomy in Bellevue Hospital Medical College, etc. With 316 Figures in the Text and two Plates. Fourth Edition. Entirely rewritten. New York: D. Appleton & Co.

A System of Gynecology. By American Authors. Edited by Matthew D. Mann, A.M., M.D., Professor of Obstetrics and Gynecology in the Medical Department of the University of Buffalo. Volume II. Illustrated with Four Colored Plates and 364 Engravings on Wood. 8vo. 1,200 pages. Philadelphia.

We have received the two works, whose titles we mention above, too late for notice in this issue of the Medical News. We will give them attention in our next number.

One of the best anagrams ever made was that on the name of the celebrated crusty physician, John Abernethy—Johnny the Bear.—*Exchange.*

Editorial.

New Remedies and Therapeutics.—Prof. H. E. Wood's work on Therapeutics has reached a seventh edition. But few medical works meet with such approval of the profession. We consider that he has a right to feel proud of his success as an author.

But we have not mentioned the work at this time for the purpose of praising it, but to draw attention to some of its contents. In glancing through it, we notice that the following drugs are mentioned as new remedies, which are treated of in the work: Hydrastin, Strophanthus, Sparteine, Adonidine, Iodol, Ichthyos, Paraldehyde, Urethan, Hypnone, Amylene Hydrate, Methylal, Oil of Sandal Wood, Kawa, Extract of Malt, Papain, Antifebrin, Salol, Bethol, Thallin, Kairin, Acetphenetidin, Lanolin, Saccharin, Sulphuretted Hydrogen.

It seems queer to us that one-half or two-thirds of these drugs should be mentioned as new remedies, for we are sure that fully that number of them we have either used or heard of their being used by others for quite a long time. The oil of sandal wood we have prescribed in cases of gonorrhea for fifteen years or longer; and when we first employed it, we were under the impression that it was an old remedy with a good many. It is, however, so exceedingly indigestible that it can only be tolerated by strong stomachs; although the most reliable remedy in clap we ever made use of, when the stomach does not rebel against it. Certainly, the extract of malt has been a favorite medicine with very many physicians, in certain diseases, for from fifteen to twenty years. The Trommer Extract of Malt Company have manufactured it for at least fifteen years, if not longer. Hydrastin has been a remedy with eclectics for many years, or we are very much mistaken.

In treating of mercury, Dr. Wood states that mercury should be employed with caution and judgment in the *primary* or *secondary* stages of syphilis. Dr. Wilbonchewitch, he says, found that the mercurial, when first exhibited, increased the number of blood-corpuscles in syphilitic patients, but after a time appears to produce an emia. Whatever preparation be employed, he thinks, should be administered so as to exhibit only signs of its constitutional action upon the mouth.

We never employ mercury in the first stage of syphilis, and in the second stage we prescribe proto-iodide of mercury in doses, say, of one-third of a grain in pill twice each day. The proto-iodide is very efficient, and requires a much longer time than calomel to produce salivation. Dr. Wood advises the use of calomel or blue-pill—one-fourth to one-half grain of calomel three times each day; or double the quantity of blue pill.

On page 525 of his work, Dr. Wood speaks of the large doses that, in years past, were sometimes administered of calomel. He says that it is free from all irritant properties, as shown when taken internally, or when used externally. "Probably," he says, "no single dose of it is capable, in the average man, of acting as a violent poison, since it is stated that in the Western United States it is very frequently taken in teaspoonful doses; that sixteen grains of it will act as vigorously as an ounce, and that a pound of it has been given, in a case of cholera, without visible effect."

A physician, a reliable man, practicing in Ohio, told us that, while attending upon a case of cholera during an epidemic, the patient having become collapsed in spite of all treatment, in his desperation to do something, he heaped a tablespoon full of calomel and gave it to him. In a not very long time signs of rallying were observed, and the patient recovered.

Dr. Wood says that it seems to him most probable that the absence of serious results from these heroic doses is due to the alimentary canal being unable to dissolve—*i. e.*, to absorb—the calomel. The late Dr. F. D. Lente, he says, has claimed that given in this way the drug acts as a sedative, and does not produce mercurialization; and Mrs. Putnam Jacobi believes such doses to be valuable in diseases where there is "sudden overdistension and paralytic congestion of extensive regions of small blood-vessels." He maintains that there is abundant clinical authority for the statement that calomel may act as a positive diuretic.

Death of Dr. Elkanah Williams.—Another distinguished man of the medical profession has died—Dr. E. Williams, of Cincinnati, the distinguished oculist and aurist. He died, October 5th, at Hazlewood, Pa., where he had been taken by his family to repose for awhile. The immediate cause of his decease, we understand, was apoplexy.

Dr. Williams' health had been failing for several years before his demise. Some two or three years ago he began to exhibit symptoms of softening of the brain; its progress, of course, being accompanied with weakening of his mental powers, so that, for several months previous to his decease, his mind was almost gone. It was indeed sad for those who knew him to contemplate him for some time before he was taken away and witness the terrible ravages disease had made with his mind, whose intellectual faculties not long before they had regarded so brilliant. Dead, as regards his intelligence, his friends could not help but consider it a blessing when his body ceased to live. Some ancient philosopher has said that we never see our friends, for that the bodies which we discern are but their dwelling places. The mind, then, having died, the body can only be regarded like we regard a house from which the occupant has removed.

Dr. Williams was born in Indiana, December 19, 1822. Until his twenty-first year his time was passed in school, or teaching, or working on his father's farm. He then entered college, and after four years' application he graduated in 1847 at Asbury University at Greencastle, then under the Presidency of Bishop Simpson.

After graduating at Asbury University he removed to Louisville, Ky., and attended medical lectures at the University of Louisville. He graduated in medicine in the spring of 1850, when he returned to Indiana and began the practice of his profession. After two years, his wife dying, he again went to Louisville and attended an additional course of lectures, when he conceived a strong desire to make the diseases of the eye and ear a special study.

In 1852 he went to Europe to pursue his studies there. For eighteen months he attended upon the clinics of the most famous European medical teachers. In 1854 he went to London, where he devoted himself to his favorite study in the London Royal Ophthalmic Hospital. About this time the ophthalmoscope was discovered by Helmholtz, and Dr. Williams had the honor of introducing its use to the profession in London. That this is a fact can be proven by consulting some of the English Medical Journals in which the credit is unequivocally given to Dr. Williams of first demonstrating to the London ophthalmologists the powers of the ophthalmoscope. After spending some time

in the European capital he went to Vienna, where he continued his studies of the diseases of the eye. After that it is stated that he spent some months in Prague and Berlin. He became so familiar with the French and German languages that he could converse in either with great fluency.

On his return to America he began the practice of ophthalmology and aural surgery in Cincinnati, being the first medical man that has ever undertaken to practice a specialty in Cincinnati. Business at first came slowly, but after a time it increased to large proportions; his services being sought by persons from every part of this great country. Until his retirement from business, he was under the necessity of having the aid of several assistants, so great had become his practice after he had gotten it established.

For twelve years or more he was ophthalmologist to the Cincinnati Hospital. He was also a member of numerous medical societies. While he wrote no book, he was a large contributor to the journals. He wrote and read numerous papers before medical societies on subjects of his specialty. His writings were regarded as authoritative, and gave him a world-wide distinction.

A meeting of the profession of Cincinnati was convened in one of the lecture-rooms of the Miami Medical College on the evening of October 6th, which was attended by some twenty-five physicians of this city, for the purpose of taking action on the death of Dr. Williams. Dr. John A. Murphy was called to the chair and Robert Sattler was chosen secretary. The committee appointed for the purpose reported the following paper as expressing the sentiments of the meeting toward Dr. Williams, which was unanimously adopted:

"The death of Dr. E. Williams, the veteran and distinguished oculist of Cincinnati, deprives the ranks of the medical profession of one of its most noted and useful men, and the community loses also a noble and unselfish friend of humanity.

"As a man, he endeared himself by his cheery and genial disposition and his unselfish characteristics to his professional colleagues, both old and young, and no one more generously received the appreciation and gratitude of his patients.

"As a physician he was equally esteemed by the profession and the community for his untiring and energetic efforts to promote the advance of medical knowledge, and in par-

ticular of the department of ophthalmology. Faithfully and zealously were his best endeavors and most assiduous energy devoted to this important division of the medical sciences. For a period exceeding thirty years he was active as a specialist and devoted all his attention and time to ophthalmology and otology. Justly does he deserve the credit and distinction of having been foremost among a limited number of men in aiding toward the introduction and establishment of ophthalmology as a recognized department of medicine and surgery in America.

"Throughout this long period he has been constantly identified with medical education. His superior qualifications as a lecturer and teacher gave him unlimited scope of usefulness as a successful instructor, and gratefully will he be remembered by a countless number of students.

"His unlimited capacity for practical work afforded him additional opportunities to aid in the alleviation of suffering, and with unremitting attention he assumed and discharged faithfully the arduous duties of college, hospital and dispensary positions.

"He was lavish, it may even be said reckless, in his offerings to charity and poverty-stricken patients; but if he erred in giving his services freely and gratuitously, it was only to carry out his desire to do good for the sake of good, reward or no reward.

"The medical profession of Cincinnati herewith acknowledge their appreciation of Dr. E. Wiliams as a distinguished physician, and unite in their expression of sorrow and sympathy over the announcement of his death.

The Bacillus of Tubercle.—Dr. Joseph Frank Payne, of London, in his recent work on Pathology, says that several investigators had observed bacteria in tubercles before Koch, in 1852, published an account of the organism, which he says is now universally recognized as the cause of tubercular disease. Baumgarten appears to have seen the same bacillus, but had not given any proof of its pathogenic character. Koch not only detected the bacillus, but at the same time showed how it could be recognized by color reactions, cultivated, and proved experimentally to be the cause of the disease in question.

Bacillus tuberculosis, says Dr. Payne, is one of the smallest bacilli; it is a motionless rod measuring about one-third or one-half the diameter of a red blood corpuscle, and

about one-sixth of its length in thickness, with rounded ends. It sometimes, but not always, when stained with analine dyes, develops a beaded structure with alternation of colored and uncolored portions. The ends are always colored; the number of intermediate colorless portions being from three to six, or rarely more. This condition has been regarded as indicating spore formation, but there is not an agreement as to whether the stained or unstained elements are the spores. Koch suggests the latter, from the analogy of the anthrax-bacillus, but the high power photographs of Dr. Crookshank seems clearly to show that the bacillus consists of a series of granules enclosed in a sheath, with intervening parts which do not take coloring matters. The stained elements would then be the spores, if spores there are; or possibly as Dr. Crookshank suggests, only certain of them, somewhat larger than the rest, are so.

ANDERSONVILLE PRISONERS DURING THE WAR OF THE REBELLION.—The third volume of the "Medical and Surgical History of the War of the Rebellion" is on our table. We could fill, we think, several numbers of the MEDICAL NEWS with extracts from it of interesting matter.

Under the heading of an article which gives information as to the prevalence and mortality of disease among the Union troops in Confederate prisons are found the following statements: "The Andersonville register extending from February 24, 1864, to April 17, 1865, inclusive, shows the number of admissions from the stockade prison to have been 17,875; but as 458 of these are reported as having been cases of wounds and injuries, and 1,430 have no diagnosis entered against their names, the cases of specified diseases number only 15,987. The result in 946 of these cases is not recorded, so that the number of cases of specified disease that may be traced to their termination is reduced to 15,041. Of these, 11,086 died, or 73.7 per cent. of the whole number. This enormous mortality is an index of the condition to which the unfortunate men became reduced before they were admitted to this so-called hospital. The professional mind is shocked in endeavoring to realize the scenes presented in an establishment the wards of which formed the portals of the grave to three out of every four soldiers who had the misfortune to enter them. Indeed, it appears that large numbers died uncared for in the prison and were removed to hospital simply for record and inter-

ment. Sometimes the deaths in the prison outnumbered those in the hospital. The reports for the week ending September 20, 1864, show the occurrence of 336 deaths in the former and 334 in the latter establishment. At this particular time, one-half of the fatal cases were already terminated when taken upon the hospital register. The average number of deaths that occurred daily during the occupation of the depot was thirty; but as many as a hundred deaths were recorded in a single day. Certainly the most fatal field of the war was that inclosed within the stockade at Andersonville, Georgia.

Ratios calculated from the hospital register have a melancholy interest as indicating the manner in which these men were cut down in the flower of their manhood. They have no bearing on the fatality of the specified diseases, as the number of those sick within the stockade is not known; but the information yielded concerning the relative prevalence of certain grave diseases is as definite as if complete records of the sickness were at command.

A table which is given shows that all the cases of disease and injuries admitted into the hospital were 17,875; cases with results unrecorded, 1,001; total cases with recorded results 16,874; died, 12,541.

It seems to us that responsibility should rest somewhere for this fearful destruction of life—the destruction of the lives of some of the best young men of the country.

"The Andersonville stockade and prison hospital were established on a naturally healthy site in the highlands of Sumter County, Georgia. The former inclosed 27 acres, consisting of the northern and southern exposures of two rising grounds, between which lay some swampy bottom, and a stream running from west to east. In August, 1864, nearly 33,000 persons were crowded together on this area, which afforded but little more than 35 square feet for each. But even this limited space was not wholly available, as six acres of the bottom land had by this time become unfit for occupation. Each prisoner had, therefore, scarcely 28 square feet of surface on which to conduct all the operations of nature. The Confederate guard occupied the fortified exterior of the stockade.

"No shelter from the sun, wind or rain, the dews of night or the frosts of winter, was furnished by the Confederate Government. Fresh arrivals of prisoners were driven into the stockade and left to find so many feet of foul surface for

their occupancy among the army of ragged, vermin covered, emaciated and dying men already there. The pines and other small trees that had originally sparcely covered the inclosure had been cut down. Fragments of tent-canvas, blankets, oil-cloth, and clothing were stretched upon sticks as a protection from the hot sun. Some of the men burrowed into the ground, and others built huts of the mud removed from these burrows.

"The sinks were built over the lower portion of the stream, but the volume and flow of the water was insufficient to carry off the excreta. Heavy rainfalls, causing the streams to overflow, spread the foul accumulations over the adjoining bottom lands, converting them into a quagmire of fermenting filth, the stench from which has been represented as horrible, sickening and indescribable. Speaking of the stream as it issued from the stockade, Dr. James says: 'As these waters, loaded with filth and human excrement, flow sluggishly through the swamp below, filled with trees and reeds coated with a filthy deposit, they emit an intolerable and most sickening stench. Standing as I did over these waters in the middle of a hot day in September, as they rolled sluggishly forth from the stockade, after having received the filth and excrement of 20,000 men, the stench was disgusting and overpowering; and if it was surpassed in unpleasantness by anything, it was only in the disgusting appearance of the filthy, almost stagnant, waters moving slowly between the stumps and roots and fallen trunks of trees and thick branches of reeds; with innumerable long-tailed, large white maggots, swollen peas, and fermenting excrement, and fragments of bread and meat.'

"But the pollution of the soil was not confined to the bottom lands. Many of the men were so prostrated by diarrhœa and scurvy that they were unable to reach the low grounds on every call of nature, and the general surface of the inclosure became covered with their morbid dejections. The ground was honeycombed with small pits, a foot or two in depth, which were used as latrines, and emitted an intolerable stench. Later, the tattered clothes of these men became the receptacle for their involuntary discharges; and ultimately the foul and wasted forms were carried out for burial. In the vicious atmosphere of this prison-pen, myriads of flies and mosquitoes were developed, which would have made life a misery even to healthy men.

"There is one form of disease which is almost too horri-

ble to be witnessed, yet we cannot understand the wretchedness of the prison without looking upon it. This is not a solitary case, but we shall find numerous others before we leave this living charnel-house. We instinctively pause as we reach the awful sight before us, holding our breath lest we inhale the terrible stench that arises from it. Here is a living being, who has been so exhausted from exposure that he is unable to rise from the ground, suffering from diarrhœa in its last form. He is covered with his own feces; the vermin crawl and riot upon his flesh, tumbling undisturbed into his eyes and ears and open mouth; the worms are feeding beneath his skin, burying themselves where his limbs, swollen with scurvy, have burst open in running sores; they have found their way into his intestines, and form a living, writhing mass within him. His case has been represented to the surgeons, but they have pronounced him incurable, and he is left here in his misery, in which he will linger for three or four days more."

We have thus taken considerable space in quoting the description of the sufferings of the poor fellows confined in the Andersonville military prison during the late war, but we feel sure that our readers will not begrudge it. Physicians should know what men have suffered. All witness more or less suffering, but all do not know, to its full extent, what human beings have been called upon to endure. Death often results from seemingly slight causes, but at other times, torments will be suffered many days, and worms feed upon the flesh and vital organs, and though death be prayed for, yet it will be a long time coming.

Scurvy and diarrhœa carried off thousands of the prisoners. Their rations consisted of corn-meal, beef, bacon, peas, rice, etc. The corn-meal was unbolted, frequently ground with the cob, and mixed with sand, gravel and dirt generally. The beef when slaughtered was brought to the prison and thrown into a pile on the ground. Here, in the hot climate, it was soon infested with flies and maggots, and rapidly changed to a greenish color, emitting an offensive odor peculiar to decaying flesh. Often before used it would become rotten, as would also the bacon.

The knives and tin-cups and plates, belonging to the soldiers, would be taken away from them, and nothing left them with which to prepare and cook the raw pork that would be divided out to them. They would be compelled, consequently, to make shift with chips, half canteens, and

pieces of sheet iron to bake one side of the miserable dough made of corn-meal, cobs, gravel, dirt and mold, while the other side would be scarcely warmed.

It has been stated that the Confederates could do no better for the Federal soldiers in consequence of their great poverty—that their own soldiers were half starved and poorly clad—that they would have gladly exchanged these prisoners for those of their own men who were held prisoners in the North, but Stanton, the Secretary of War, would not consent to it, for the reason that just so many able-bodied men would have been added to the depleted armies of the South. But we do not know about these statements. We feel that a fearful responsibility rests somewhere for the terrible sufferings endured during the war in the southern prisons and hospitals.

The German Physicians of the Late Emperor Frederick have published a statement concerning their participation in his case, an abstract of which has been cabled to the Associated Press and appeared in the daily papers. They state that in May, 1887, they pronounced the disease to be cancerous, and recommended that the larynx be opened and the growth on the left vocal cord be excised—"a small operation which promised the best results." Of seven such operations which Von Bergmann had performed, all were successful. Sir Morell Mackenzie was then called in, and opposed the operation, and, the report states, gave his assurance that after a few weeks of treatment the patient would recover his voice and be able to command the autumn maneuvers. Dr. Gerhardt accuses Mackenzie of having removed, for microscopical examination by Virchow, pieces of tissue from the unaffected part of the throat.

Dr. Schroetter states that when he first examined the patient's throat in November, 1887, he decided that he was suffering from a cancer so far developed as to make it necessary to extirpate the larynx. Mackenzie, he says, then admitted that the growth looked like a cancer; but the Emperor Frederick refused the plan of extirpation because of the risks attending it. The German physicians thereupon signed a declaration placing the responsibility of the case upon Sir Morell Mackenzie.

Sir Morell Mackenzie is reported to have unqualifiedly denied the correctness of the above statement by the German physicians, and that in the course of a few days he

might be able to publish a statement of the details, as to the character and conduct of the case, from which, at present, he is precluded by state reasons.

THE MIAMI MEDICAL COLLEGE.—Since the Miami men took out a charter for a college a second time, having abandoned the charter of their first college in order to "consolidate," as they termed it, with the Medical College of Ohio —the so-called consolidation having continued only about a couple of years; the late Dr. George C. Blackman would not permit it to continue longer—death has been busy among them, having removed their ablest men. Dr. J. B. Smith, a most able obstetrician, died just previous to the opening of the first session. After awhile his death was followed by that of Dr. George C. Mendenhall, a gentleman of high standing in the community and having a large and select practice. A few years ago Dr. William H. Mussey, a son of the distinguished surgeon, Dr. Reuben D. Mussey, died. Dr. W. H. Mussey was known as a person of stern character and of the highest moral integrity. He detested sham and hypocrisy of every kind. He was not a popular man, for he possessed too much individuality to be a popular man, but he was respected by all good men who knew him. Though he had many friends, yet, of course, he had many enemies. It could not be otherwise with such a man. He was a good teacher of surgery, performed many difficult surgical operations and gave luster to the College. Three years ago, or thereabouts, Dr. William H. Clendenin died. He was highly respected in the community, was beloved by every student that attended the Miami College. When he died the College lost one of its most attractive teachers.

Within a few days Dr. E. Williams, the famous oculist and aurist, has departed this life. He was, as all know, a very distinguished man. His merits are set forth in another part of this issue of the MEDICAL NEWS. We will mention here that Drs. Mussey, Clendenin and Williams were never members of the Miami Medical College of the *old charter*, and consequently did not take part in the before-mentioned consolidation of the faculties of that organization and the Medical College of Ohio,

It would be supposed that a college having men in its faculty of the type we have just mentioned would have greatly florished. But such has not been the case with this new Miami Medical College. It has never flourished, and

we feel sure that it never will, so long as its faculty is compelled to drag along with certain individuals connected with it. That what we state is true needs but little reflection to confirm. It has the advantage of the Medical College of Ohio in that it owns its own building without encumbrance, and it has a *harmonious* faculty. Why, then, with such a man in its faculty as Dr. E. Williams, famous throughout the world where scientific medicine is cultivated, and with such men as co-laborers with him as Drs. Mussey, Clendenin and Mendenhall, has it such beggarly classes of twenty-five or thirty students (matriculates we should say, some of whom were probably graduates and practitioners for ten or twelve years)? Other medical colleges that have a distinguished man or so in their faculties prosper, having large classes, though the majority of the professors have no reputation.

The fact is, the faculty of the Miami College has something more serious as a hindrance to interfere with the prosperity of the College than having a large part of it made up of "small men." "Small men" can usually be easily carried, if there are a few eminent men among them, providing they are gentlemen and really endeavor to be good teachers; but when they are marked by selfish traits of character, though they may be "small," they become heavy weights, and they will weigh down any institution.

Men who will use their position in efforts to injure others, who are more occupied in devising means to inflict a despite than they are in studying to advance themselves and their students in knowledge, will, by their tricks and unhallowed methods, pull down and destroy faster than talents, however great, can build up. This is a recognized fact.

We have been hoping for a long time that the Miami College would rid itself of its dead weights. If that could happen, we have no doubt but that it would soon run ahead. When a meeting of the profession of the city was called (to meet in a lecture-room of the College), to take action on the decease of Dr. Williams, it was a gratifying sight to enemies, though a sad one to its friends, to see only the dozen or so chairs that were present that accommodated the members of its class, but which were probably twice or three times as many as were necessary for the purpose.

We have said what we have on the lack of prosperity of the Miami Medical College, though it has possessed great advantages, to show how the results of the toil of talent,

industry and high moral character will be entirely destroyed by the acts of selfish, small men, who, thinking that they are advancing their own interests by their tricks, are really hurting themselves and ruining the prosperity of the school with which they are connected.

QUARANTINE.—Dr. Henry B. Blake, of Lansing, Mich., Secretary of the State Board of Health of Michigan, is undoubtedly one of the most eminent sanitarians of this country. We have received an address by him which he recently delivered on the "Recent Advances in State Medicine" in which he discusses a number of subjects having reference to the prevention of disease. We will quote what he has to say in reference to quarantine:

"There has apparently been great progress in keeping certain diseases out of this country by means which we yet call quarantine. Formerly, yellow fever was so frequently introduced into New Orleans that many believed it was endemic there; and cholera was generally brought into this country whenever it was prevalent in Europe. Now, both of these diseases are kept out. The great money losses to trade in New Orleans have tended to aid sanitarians in perfecting the quarantine at that point. Under the able leadership of that brilliant sanitarian, Dr. Joseph Holt, the quarantine at New Orleans has been brought to a high state of perfection. Perhaps the best evidence of the possibility of general progress, however, is the general criticism of what has heretofore received no attention. As an offset to the criticism of the quarantine system at New York, it should be noted that during the last year that part of New York has been tried—cholera was brought to it and, so far as is now known, it was not allowed to gain a lodgment. . . . What is really needed is, that the local quarantines shall be perfected; that the National Government shall *add* its best services to those of the States and localities; and that those other dangerous communicable diseases, diptheria, scarlet fever and typhoid fever—which cause much more sickness and death than do yellow fever and cholera—shall also be excluded by quarantine. If it be argued against this plan that those diseases are endemic, it may be replied that, before its exclusion, yellow fever appeared to be endemic; and smallpox is still, yet we try to exclude it, and undoubtedly save thousands of lives thereby, and might exclude it almost entirely by more perfect methods."

Dr. Baker speaks of the investigations that have been in progress for a number of years in regard to the theory of disease. Some time ago we mentioned the fact in the MEDICAL NEWS that the Government of Germany had made appropriations for meeting the expenses of the laboratory, conducted by Dr. Koch, engaged in bacteriological investigations. In this country, as Dr. Baker states, the National Government has done nothing in that direction; but a few individual officers, engaged in the U. S. Service, have contributed not a little; notably, Dr. Sternberg, of the U. S. A. In Baltimore, as our readers are aware, there is a well-equipped bacteriological laboratory under the direction of the Professor of Pathology of the John Hopkins University. "In Brooklyn," as stated by Dr. Baker, "the Hoagland Laboratory—the gift of Dr. C. N. Hoagland—under the immediate supervision of that gentleman, who provided the funds for the building and its equipment, will supply all the facilities, both for students and for advanced investigators, which can be found in the best equipped laboratories of Europe." In Missouri, he also says, the legislature has appropriated $5,000 for the creation of laboratories for bacteriological study and investigation, and for the culture of vaccine virus, in connection with the State University at Columbia.

Dr. Baker speaks of the purification of water by chemicals. His remarks should be interesting to the people of Cincinnati, whose water, obtained from the Ohio River, is often loaded with mud or clayey soil. He says that Prof. Leeds, of New Jersey, added alum, in the proportion of a half grain to a gallon of water, and found, with the precipitation of peaty matter, etc., a reduction of the bacteria to such an extent that whereas before precipitation it contained 8,100 colonies per cubic centimetre, after precipitation the supernatant water contained only 80 colonies. They were all the bacterium lineola, and by filtering this supernatant water through a double thickness of sterilized filter paper into a sterilized tube, he found no bacteria in the filtered water. An interesting question is, Whether or not the bacteria of typhoid fever would be removed by this same agent?

THE PHYSICIAN'S LEISURE LIBRARY.—We have received from the publisher the numbers composing the series of these works for 1886, 1887 and 1888. They came too late for us to do more in this issue than merely to make mention

of them. A number is issued each month at $2.50 a year bound in paper, or $5.00 a year bound in cloth. Single copies, paper, 25 cents; cloth 50 cents.

Published by Geo. L. Davis, Detroit, Michigan. We advise our readers to forward twenty-five cents for a sample copy.

How Do Microbes Produce Sickness.—This is a subject that has been of intense interest to me, and upon which I have spent a great deal of thought. The more I investigate, the more satisfied am I *that the secretions and excrementitious matter of micro-organisms are the direct factors in the causation of disease, producing the various leucomaines whose toxic influence acts on the nerve centers of the patient, producing the fever charactertstic of the microbe; the organisms themselves being only the producers* of the secretions.

This I hinted at a year ago in a letter to the *New York Medical Journal* in reference to the treatment of typhoid fever, and I am more than delighted with the results of my experiments in this direction; and would wish to impress upon your readers the fact that if they will treat all diseases arising from the presence of micro-organisms keeping this in their minds and acting accordingly they will find success crown their efforts. James Barnsfather.

Dayton, Ky., Oct. 7, 1888.

Eli Lilly & Co.'s Preparations.—Dr. J. Kendell, of Covington, Ohio, writes as follows: "I have used Elixir Purgans myself and have prescribed it for my patients, and take pleasure in saying that it is both pleasant and agreeable to take, and effectual in its results, and well adapted for either a cathartic, laxative or aperient."

In regard to Succus Alterans, Dr. P. A. Gordan, of Junction City, Ohio, expresses himself, in a letter, as follows: "I have used it in both secondary and tertiary syphilis, during the last two years, with the most gratifying results. To the general practitioner of medicine it is a veritable desideratum."

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Original Contributions.

Diseases of the Skin.

BY R. R. HOPKINS, M.D., RICHMOND, INDIANA.

Some two thousand years ago, the Hindoos attributed all diseases of the skin to parasites. In this instance, it has taken the history on this subject a long time to repeat itself; but that theory has been brought to the present time, and well proven to be correct by the best scientific writers on the subject. To the minds of many—even of some scientists—a wrong impression is thus conveyed, and they mistake the fatty matter which may be squeezed out of the sebaceous follicles for veritable insects or worms. In the Bible account of the human race, the first prevalent and prominent diseases were those of the skin. The leprosy was the extreme and dangerous form. Moses clearly describes two distinct forms of leprosy, one of which was mild and the other malignant. Dunglison, in his History of Medicine, takes his authority from Moses—as comprised in his hygienic precepts—whose description of the characteristics by which the white leprosy might be discriminated, as well as the means which ought to be had recourse to for its cure, teaches how to distinguish the spots which announce the speedy invasion or the existence of the lepra from those which ought not to inspire suspicion, and treats fully, in the thirteenth chapter of Leviticus, of the various symptoms of that dreaded affection. Again says Dunglison: The Levites alone knew how to treat the lepra: they isolated the patient, and purified his blood by repeated ablutions. As the Hebrews became gross in their dietetic habits, and sensuous generally, diseases of the skin became correspondingly prevalent. Run-

ning sores, ulcers, boils, or carbuncles were also common, as we learn from the law of uncleanliness as applied to issues in the fifteenth chapter of Leviticus.

The careful reader of the Scriptures will not fail to notice that the term "plague" is frequently applied to the malignant form of leprosy in the middle ages. The cities of the old world were frequently ravaged by a fever which was termed the "plague," the "black death," and the "great mortality." The difference between the leprous and the fever plague was owing only to the difference in the rapidity with which the causes were applied. If the system becomes rapidly infected with impurities, a febrile disease will be the consequence; as in the case of typhoid fevers, as well as all fevers of a continuous type. If the accumulation of poisons or impurities is more gradual, and the system has sufficient vigor to make the remedial effort in the direction of the cutaneous emunctory, diseases of the skin, without fever, will be the consequence. The first recorded general plague in all parts of the world is said to have occurred 534 B.C.; although it had occurred at Athens and Rome nearly a century before, and in Egypt and Syria two centuries earlier. Still, fevers are not now such desolating scourges as they were some centuries ago, for the reason that the people are less filthy: they may have less vital stamina, but they pay more attention to personal cleanliness. Modern cities, also, are under better sanitary conditions and regulations than were those which were so severely and repeatedly desolated by the plague; wider streets, improved sewage, better ventilated houses, and the prompt removal of offal, have rendered pestilence of all kinds less prevalent in many cities.

Cutaneous affections are plagues diluted—they are pestilence of the sporadic kind. The causes of both are similar; but plagues require filthy surroundings as well as foul blood, whilst skin diseases may result from impurities of blood when all the surroundings are hygienic. Then, in reasoning from cause to effect, we can trace the origin of the malady to hereditary causes. Eruptions of the skin are indicants of efforts of the system to rid itself of morbific matters through the cutaneous emunctory. If the remedial effort is violent, there will be fever, as in the exanthems; if the effort is more gentle, the result will be pimples, vesicles, scales, ringworms, blots, eczema, according to the amount and kind of impurities existing in the system. If the glands and

follicles of the skin become much obstructed, or injured mechanically, excrescences, tubercles, tumors and other abnormal growths may appear; if the morbific element is chiefly bile, erysipelas, rashes, tetters, salt rheum, pimples, and blotches will result. Erysipelas fever is the most striking illustration of a bilious humor. It never occurs except when the whole mass of the blood is surcharged with the biliary elements, and the attempt of the system to get rid of it rapidly through the skin is what constitutes the exanthem known as erysipelas. But if a less quantity of biliary matter were in the blood—or a less violent detergent effort made—the cutaneous affection developed would be some of the chronic diseases above mentioned. Discolorations of the skin may result from deposits of the biliary matter in the cutaneons glands and follicles, as seen in the mottled faces and foreheads of those who have long suffered from torpid liver; or from the use of certain drug medicines, as in the case of the "blue disease," occasioned by nitrate of silver. Again, it may be caused by the extravasation of thin and putrescent blood under the cuticle and in the areolar tissue of the skin, as seen in putrid fevers, also in hemorrhagic malaria. It is also sometimes met with in smallpox. As a rule, the more vigorous the circulation is, the more liable the person is to rashes and humors on the surface when the blood is impure. When the circulation is feeble, the depurating process will be attempted from the skin instead of toward it: the patient will then suffer from humors and eruptions on the mucous surfaces. He may have "canker of the stomach," trouble with the mucous membranes of the mouth, duodentitis, catarrh of the bowels, bladder, or, even, the mucous membrane of the whole alimentary canal may be in a state of chronic inflammation, quite analogous to erysipelatous, hepitic, and eczematous affections of the skin. The sympathy, or contiguity, between the skin and mucous membrane is very intimate. Both may be employed as depurating surfaces for morbid matters; but the safe remedial effort is always in the direction of the skin, and this principle explains why it is so dangerous to repel humors from the surface, or, in other words, "strike them in." Repelled smallpox is always fatal; and if the eruptive stage of measles or of scarlet fever is checked suddenly, the patient is very apt to die as suddenly, unless the eruption is brought to the surface. Nor can chronic eruptions of any kind be repelled from the surface without danger. Children suffering from scarlet fever

are often killed by a single dose of castor-oil administered just as the eruption is making its appearance on the surface; and a bleeding in that stage of the disease is as fatal as a bullet through the heart.

Our ancient and medical authorities have distinguished somewhere near three hundred diseases and morbid conditions of the skin. Many of these—and perhaps the most of them—are caused by parasites: but it is thought best to have dwelt at some little length upon the above, as we have come to think that they are induced from the causes heretofore named. Now, dear reader of the Cincinnati MEDICAL NEWS, we can not all be specialists; hence, we require a practical classification. As we all know, Hippocrates divided cutaneous affections into two classes: local and constitutional; the latter class embracing the exanthems or eruptive fevers: smallpox, measles, erysipelas, scarlatina, miliary fever and plague. Riolanus, early in the Seventeenth Century, arranged them in three groups or classes: pustules, deformities and tubercles. Plench, in 1776, arranged them in eight classes. Allibert, still later, made a natural classification constituted of a single group. Dermatoses divided them into twelve sub-classes, or smaller groups. Later authors among whom are Wilson, Bulkly and Geo. Henry Fox, and others of recent date, have extended the catalogue of classes to many more—some of them to forty groups, each class or group including many species or varieties, until the classes are almost infinitum. The busy practitioner can not be a specialist on all the minute divisions of this subject any more than he can be on others. Then we must have something practical for all practical subjects, that we can apply to every-day use in the field of labor. The following, I am satisfied, is the most practical. By taking the definition of each one, we can classify and treat respectively the various diseases as they come up:—

1st. Exanthems.
2d. Rashes.
3d. Eruptions.
4th. Discolorations.
5th. Morbid growths.
6th. Parasitic affections.

The exanthems are essentially febrile diseases, and embrace the eruptive fevers above mentioned. The rashes include a variety of affections usually denominated erythemia or inflammatory blush, as urticaria, rose-rash, etc. The

third group embraces all of the affections to which the term "cutaneous eruptions" is applied, either in its strict or limited sense; as, pimples, humors, salt rheum, tubercles, eczema, tetter, scald-head-pemphigus, rupia, impetigo, chilblains. The fourth group includes blotches, spots, freckles, stains, leprosy, nævi. In the fifth group are found excrescences, tumors, corns, warts, bunions, wens. The sixth group embraces scabies, grocers' itch, barbers' itch, and all diseases induced by insects and parasites which attach themselves to, or burrow and breed under, the cuticle. We confine ourselves to the skin diseases and their causes in this article—not to the pathology or organic chemistry of the great organs of the body—and especially to those that are supposed to be caused by parasites, as has been demonstrated by the ablest scientific writers, as before mentioned in the beginning of this article.

Now we will speak of some of the causes of skin diseases. As an intermittent fever is the type of all malarial fever, so is miliary fever the type of all eruptive fevers—and we have the eruption of all grades and sizes. But the miliary fever, as for itself, is a fine eruption, resembling millet seeds; it is caused usually by hot drinks, condiments or indigestible food in connection with overheated and badly ventilated apartments—a similar rash or eruption sometimes occurs in hot weather after eating freely of stale cheese, sausages, or shell-fish, or any other very indigestible meats—we have it in children, produced by heat. All of these causes tend to check the excretion of bile, which, accumulating in the blood, induces the remedial effort to expel it through the surface—and for these reasons miliary fever is very common with the lying-in woman. It has prevailed as an epidemic in seasons where prolonged heat and the dietetic errors above indicated combine to produce an extremely bilious condition of the blood. There are many of our chronic eruptions of the skin that are regarded by our authorities as distinct diseases, that are caused by defective biliary excretion, the remote causes being unhygienic habits of all kinds, but more especially irritating condiments and constipating food. Butter, cheese and sugar are among the articles of diet in common use which are especially conducive to bile, humors, and cutaneous eruptions; but, probably, the use of fine flour—and if fermented, so much the worse because of its constipating effect—is among the most effective of the predisposing causes; hog's lard, although condemned by all sound physiology, yet

almost universally employed as a shortening or seasoning material by civilized nations, is among the worst things that can be named to render the blood foul, the secretions impure, the biliary excretions viscid, and the skin rough, blotched and eruptive. Combinations of fine flour, sugar, butter, and eggs, as in many forms of fancy fruit and wedding cakes, are extremely constipating to the bowels and obstructing to the liver, and are the cause of pimples and warty excrescences on the skin. The different kinds of alcoholic liquors, when used excessively, are well known to occasion very different appearances of the skin. Thus, brandy flushes the face; rum reddens the nose; gin induces paleness, and beer a lividness of the surface. Strong coffee often occasions a dark crimson discoloration of the face, more particularly manifested on the nose, and worst on the very tip of the nose. These different effects of the different kinds of alcoholic liquors are easily explained. These liquors are all compounds of alcohol, water, and various foreign ingredients or drugs; and it is the drugs which give them their peculiar properties. Brandy is medicated with aromatics, which, being medicinally stimulant, are expelled through the surface, thus occasioning redness, or a feverish flush, as all stimulants do. Gin is medicated by diuretics, which are excreted in the direction of the kidneys, thus determining circulation from the skin. Whisky, which is only diluted alcohol, is neutral in this respect; that is, it is expelled through the emunctories generally, and especially not in any one direction; hence it does not materially affect the color or appearance of the surface. The influence of alcoholics, or their effects on the cells of the brain—thereby causing its organic diseases—we will not undertake to call attention to here. The various kinds of wine effect the skin very differently, because they are very differently drug medicated. Some occasion redness, like brandy; others, paleness, like gin, and others cause neither, like whisky. New cider is more like brandy in its effect on the skin, while old or hard cider is more diuretic, like gin. The various brands of ale, porter, beer and all malt liquors are more like brandy than gin in discoloring the skin. They occasion at first a dark crimson flush, verging in time to lividness, and followed eventually by a dropsical swelling of the skin. Of course the degree of discoloration, or other cutaneous affections resulting from any kind of alcoholic liquors, is more or less modified, diminished, or intensified by other habits. Constipating food, and sedentary occupations will aggravate

the tendency to discolorations of the face, while the opposite circumstances will make the paleness more visible, as the balance of medication in the liquors is stimulant or diuretic. Young persons whose blood has been depleted, and whose vitality has been exhausted from any cause, are liable to ugly and obstinate pimples and blotches on the face. The immediate cause of this condition of the skin is the same as in other cases mentioned—accumulated bile elements in the blood obstructing the glands and follicles of the skin—and are the more difficult to remove because of the enfeebled circulation. Torpid or inactive livers are often inherited, and often acquired by lacing and corsetting, or by any pressure that interferes with the circulation of this great organ, the liver. Again, it ought to be known to all persons—and mothers especially—that if the body is often overheated, or the mind continually worried during gestation, the liver will become chronically congested, and the child will inevitably have a predisposition to morbid humors and rashes of some kind. Some children are born with eruptions on the mucous surfaces, and erysipelatous rashes over the whole skin, because their mothers were overworked and overheated during the whole period of pregnancy. If to these causes are added an irritating regimen, consisting of an excessive use of salt, butter, cheese, greasy pastry, vinegar and pepper, the matter is still worse: the child will be the victim of aptha, gum-rash, skin-rashes, scales, blebs, tetters, etc., if it has vigor to determine the morbific to the surface; or, if too feeble for this, the glands will swell and the "scrofulous diathesis" appear.

As for the treatment of skin diseases, we can not go into detail on all the diseases of the cutaneous surface. For the special treatment, we will refer to our authorities on these subjects; and for our purpose in this article we will present that part of the treatment which belongs to hygiene, as it is greatly neglected in this class of diseases.

The acute eruptive fevers, and all rashes attended with feverishness, are to be treated on the plan applicable to simple fevers: ablutions, tepid or cool, according to the temperature of the body, are the important and essential appliances. If these are managed judiciously, with such nursing as common sense dictates, there will be little difficulty in treating successfully the whole catalogue of febrile skin diseases in their mild form. When acutely severe, they will then have to come under internal as well as external medica-

tion. Chronic affections of the skin require a prolonged treatment and a strict regimen. Two things are essential in the dietary: unleavened wheat meal bread, and good fruit. Milk and sugar may be tolerated in some cases with no appreciable injury, but they are always better dispensed with. I doubt if any one dietetic error can be named more conducive to bilious humors and erysipelas eruptions than the free use of sugar. Milk is especially objectionable to those who are liable to constipation. Seasonings of any kind can not be used too sparingly; while salted meats and shell-fish are inadmissible in all cases. Bathing should be so managed as to assist nature in freeing the skin of its morbid accumulations, and to restore the action of all the secreting and excreting organs of the body, and especially to restore the action of the liver. For persons of vigorous constitutions, and with no deficiency of bodily temperature, the wet-sheet pack, two or three times a week, is the best appliance for putting the skin in good condition yet discovered. . But here I must say there is a prevalent error: that of sweating too much. Sweating beyond a moderate extent is not a cleansing but a debilitating process. The patient, therefore, should never be kept in the wet-sheet pack—or even in the bath—so long as to induce much sweating. The object in a general bath, or in packing, is to promote the circulation in the superficial blood vessels, and not to deplete the blood of its serum, or watery constituents. For persons of low temperature and feeble circulation the tepid rubbing each other day, or the half-bath at about 85°, alternated with dry rubbing, is preferable to the bath. Hip-baths can be advantageously employed in all cases. They may be employed once or twice a day, according to the vigor of the patient, and of a temperature ranging from 70° to 90°, according to the bodily temperature; the time may vary from five to thirty minutes. The rule for managing hip-baths in skin diseases is to avoid any permanent chilliness or any disagreeable sense of fatigue. A very cold and prolonged hip-bath should never be employed in any form of cutaneous, eruption. The wet-girdle is applicable to all cases where the liver is manifestly enlarged, or in a state of chronic inflammation; as will be denoted by a fullness and tenderness under the lower ribs of the right side, and pain about the shoulder blades, or by symptoms of jaundice. It should never be worn constantly, so as to occasion ulcerative inflammation of the skin, but may be worn from three to six hours during the middle part of each day.

When the liver is too torpid, fomentations should be employed from ten to twenty minutes every day for a week. A flannel wrung out of hot water and applied to the region of the liver, as warm as the patient can bear it without injuring the skin, answers all purposes. While undergoing the curative processes it is of first importance that the patient should have sufficient sleep—here is where health institutions have one great advantage over home treatment. There it is made an inexorable rule, and to insure quiet sleep and perfect assimilation, the patient must avoid late suppers; it is better to eat no supper at all, to take the second meal at about three o'clock P.M., and nothing afterward.

With regard to morbid growths, they can easily be removed by a few touches of nitrate of silver, or pure acetic acid: or acetate lead, ℥ij; acetic acid, ℥ iv; water ℥iij. Mix. Apply frequently. While parasites of all kinds of vegetable origin will cease to trouble the skin after all of its impurities, the offal on which they feed, are removed. (Refer to CINCINNATI MEDICAL NEWS, Nov. 1872, page 495.) In a large majority of diseases of the skin the simple indication of cure is to purify the blood. This applies to all acute or febrile cases. In some of the chronic cases, there is a sub-indication; *i. e.*, to restore the liver by special appliances. The common sense of all mankind, and the teachings of all medical schools, recognize these indications; but when we come to the way and manner of doing it—the *Methodus Medendi*—everything is "confusion worse confounded." Everybody has a remedy. Even charms, with all the ignorance of ignorant persons, are presenting themselves. Faith doctors (if doctors they may be called) are offering their delusions; and many persons know of something that is good to purify the blood, and grandly antibilious on the liver. The quacks parade their never-failing nostrums, indorsed by innumerable certificates from the clergy, both high and low; and from persons who seem to be intelligent upon many other topics of interest. All claim to have the great remedy derived from mineral, vegetable and animal kingdoms, named by the hundred. Some are said to attenuate the humors; others, to remove effete matters; others, to neutralize noxious agents, and others, to force the torpid or exhausted organs to perform their duty. These worthless medicines, with all their certificates from the clergy and the laymen, as well as newspaper advertisements all claim to possess cer-

tain inherent medical properties which act on particular parts or organs by some eclective or special affinity; and many persons of intelligence purchase these nostrums, and uphold and give countenance to such quackery and its worthless vendérs in place of going to an intelligent and educated physician and give him a reasonable fee—at half the cost of the nuisance—and perhaps save a human life, or, at least, mitigate much suffering and lessen the duration of the patient's illness.

In speaking of purification, we may purify air and water by chemical agents—absorbents and disinfectants. This is accomplished by removing the offensive material, which is either absorbed directly and fixed in some other substance, or decomposed and then removed, but there is nothing analogous to this in the living organism; for here everything must be transitional and nothing fixed. Purification is limited to the simple process of expulsion. The offensive material must be got rid of at any cost of vital power. Hence, so long as it is present, the vital powers must expend more or less of their unreplenishable fund of life in warring upon these impurities. Were noxious matters allowed to accumulate indefinitely, the channels of life would soon be so obstructed that death would result. The living organism is self-regulating. Its life may be summed up in the word, Nutrition; and nutrition means assimilation and disintegration—the conversion of alimentary materials into structure, and the removal of the debris or waste matters.

The digestive system prepares the materials for assimilation; and the excretory organs, the skin, lungs, liver, bowels and the kidneys carry off the waste matter. It is clear, therefore, that if the excretory organs are defective in action, the waste matters will accumulate, and the blood will become foul. Poisons or impurities, whether mingled with the food or administered, or taken in any way into the system, will produce a deleterious effect on the system; hence, the process of purification has a negative as well as a positive side—"cease to do evil," as well as "learn to do well." Do not take anything into the system which is not in itself wholesome and promotive of the normal action of all the excretory organs. It is a common notion that boils and running sores are purifying processes; this is true only as it applies to the disorganized structure of the part affected. Ulcers and abscesses have no purifying effect on

the mass of the blood. It is a serious mistake in water-cure practice—and many of our regular practitioners advocate the same—to apply cold cloths to the surface of the skin until it is ulcerated, and then continue them to promote suppuration, with the view of cleansing the blood. The effect is just the contrary, and it is a drain upon the pure blood.

The true healing art does not consist in destroying any normal structure; nor in producing artificial depurating channels; but it does consist largely in purifying the system through the natural channels.

As we have talked some time upon this subject from our standpoint, and treated quite lengthily on the hygiene purification, and of parasites from vegetable origin, we will only mention animal parasites of the human skin. For their history and treatment, we can not refer to a better authority than B. Joe Jeffries, A. M. M. D., who treats of this subject, as well as of false parasites and parasites of a vegetable origin, thoroughly.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

TREATMENT OF ULCERS OF THE LEG.

THE *Revue Médicale de l'est* reports the following method of treating ulcers of the leg, as one that has given good results.

The leg is carefully shaved and cleansed, then there is applied to the ulcer with a brush a moderately thick layer of the zinc gelatine preparation described further on, and this up to the borders of the ulcer, which are covered with iodoform powder or any other antiseptic powder, as subnitrate of bismuth, boric acid or napthaline; the latter being particularly useful in diminishing the odors of some ulcers. A small layer of cotton is placed over the dressing, and the whole firmly fixed with a gauze bandage, taking care that the pressure exercised be toward the center of the ulcer; when the gelatine ceases to penetrate the meshes of the gauze, the pressure is stopped. The dressing soon

dries and the patient can be sent about his business without further precautions.

The dressing is changed after three or four days, but if necessary can remain on a week, especially in the subsequent treatment. It is easily removed with scissors, with blunt points, and with the addition if necessary, of a little warm water; the gauze impregnated with geltaine can be removed like the peel of an orange. If the secretion penetrates the dressing before the end of the week, a little iodoform can be dusted on the moistened spot and covered with a piece of linen, which can be removed when soiled.

The following is the formula:

℞ Oxide of zinc, Gelatine, } ââ 5 parts by weight.
Distilled water, 6 " " "
Glycerine, (pure) 8 " " "

The gelatine is first dissolved in water heated to a moderate temperature, to replace the water which has been evaporated. When the whole is reduced to a uniform mass, the oxide of zinc finely pulverized is added with the prescribed quantity of glycerine; after mixing and evaporation of the water, it is poured out upon marble. The preparation has the consistency of white lime, without any glutinousness. When it is to be used, a small quantity is placed in a pot kept in boiling water: the consistency becomes then that of syrup. If necessary a small quantity of water can be added.

The principal advantage of this plan of treatment is the possibility of curing the patient without necessitating his being kept in bed and thereby disabled from attending to his affairs.

The treatment lasts from three to six weeks.

Appropos, there may be mentioned here the method of dressing devised by Dr. Desphats and reported in the *Journal des Sciences Médicales de Lille.* It consists in this: The wound and the whole leg are carefully washed with a solution of corrosive sublimate, 1 to 1000; then the depression of the ulcer is filled with a pomade of salicylate of bismuth; then the whole leg and foot are covered with cotton-batting, and this fixed with a roller bandage. A stocking is drawn over the whole. The dressing is renewed at intervals of six to seven days.—*Nicé Médic. U. M. de Canada.*

FOR TAENIA.

℞. Ethereal oil of male ferne, . gtta 45.
Tinct. of vanilla, . . " 45.
Powdered G. acac., . . gr. 30.
Distilled water, . . . gtta 40.

M.—To be taken with an equal quantity of milk. A dose of castor-oil two hours after meals.

ON THE PARALYSIS OF NEW-BORN INFANTS.

The new-born infants very frequently present paralysis consecutive upon their accouchement, these are facial hemiplegia, paralysis of one arm, hemiplegia or paraplegia.

The paralyses are in general the result of a compression of the nerves by the obstetrical maneuvers of the forceps, or by turning, or by compression of the brain from the passage of the head through a retracted pelvis. An example:

Normal delivery in a secundipara; pelvis slightly flattened; left peripheral facial paralysis; rapid recovery. April 20, the woman M. presented herself at the Pavillion Velpcan, service of M. Bouillz.

On her arrival (five o'clock in the evening), the head was found well engaged, but still a little high up; flexion not yet complete; position, left occipito out.

Labor continues regularly and delivery occurs spontaneously at 12:45 A. M.

Total duration of labor about 15 minutes.

Age of mother 21; has never been ill.

Her first labor about two years ago terminated in the delivery of a dead child, the death occurring probably during the labor, which was rather of long duration but did not necessitate any interference.

No traces of syphilis.

The thighs are somewhat curved; no other sign of rhachitis.

An exploration of the pelvis shows that it is somewhat flattened; the antero-posterior diameter (sacro-pubic) measures 10 centimeters.

The infant is a well-formed boy weighing 3.040 grammes. Immediately after delivery, after the child had been washed, a marked deviation of its face was observed whenever it cried. A complete paralysis of the left side of the face can

be noted. The left eye remains open and the features are drawn to the left.

No apparent deviation of the tongue or the vulva.

Sensibility appears preserved.

Slight deformity of the head, the right parietal eminence pushed back; a somewhat extensive sero-sanguinolent eminence. On the left, a small reddish trace on the skin of the temple and running from above downward and from behind forward.

The diameters of the head are:

The Maximum diameter,	13.8.
" Occipito-mental,	13.3.
" Occipito-frontal,	11.5.
" Occipito-bregmatic,	9.5.
" Biparietal,	9.2.
" Bitemporal,	8.

Suction is but slightly embarrassed. Nevertheless, a small quantity of the milk dribbles from the left commissure.

The second day the paralysis appears marked.

The third day, the eye a little less open.

From the fifth day the paralysis began to disappear rapidly, so that by the tenth it was discharged, the infant presenting nothing abnormal in its physiognomy.

Paralysis in the new-born produced by the same conditions can also be observed in the upper limbs, and in an excellent work upon the subject, Dr. Roulland reports a considerable number of observations. As to the paralysis of the lower limbs and to the hemiplegias, they are of an essentially different nature. These are not peripheral paralyses, for they are due to central lesions of the spinal cord, or of the brain, and frequently to cerebral hemorrhage.

It may thus be said with M. Roulland, that all the new-born on arriving on this world are liable to be affected with a paralysis due to the mechanical phenomena of delivery; whence the name *obstetrical*, applied to this form of paralysis. It is either spontaneous or provoked. These two words explain themselves; in the first instance delivery is accomplished without interference; in the second, interference became necessary—either in the form of the application of the forceps, or mere manual interference to hasten the delivery of the fœtus, as by tractions, or to correct some obstacle as to the replacement of the arm above the head.

However it be, whether after interference or without interference (and the most experienced practitioner may,

despite all his prudence and precautions, produce this accident, and which is therefore much more liable to occur where any interference has been blind and hurried) it can be said that the *obstetrical paralysis* is due either to a lesion of the peripheral nerves or to a lesion of the nervous centers.

Peripheral paralysis is much the more frequent. It affects especially the face and upper extremities.

In the *face* the paralysis of the facial nerve is produced ordinarily by the application of the forceps; this is the most common obstetrical accident. But the paralysis called *spontaneous* also exists, although very rare. It is produced by compression of the nerve against the sacro-vertebral angle (compression favored by narrowing of the basin or by inclination of the position) against the ischü, or against the pubis. Tumors of the pelvis have also been incriminated. In certain cases the paralysis is but partial, bearing only upon the temporal or cervical branch of the facial.

These accidents occur when the fœtus presents by the vertex, by the face, or by the buttocks.

Paralysis of the third pair, producing ptosis, is possible under the same conditions.

In the upper extremities the muscular inertia presents itself under various conditions.

It is *spontaneous* when there is an exaggerated bisacromial diamter, without it being at all useful in aiding delivery.

It is *provoked*—

First—In cephalic presentation: (*a*) When, in applying the forceps, one of the blades is pushed too far and compresses the lateral part of the base of the neck. (*b*) When the shoulders delaying in engaging, we pull on the posterior axilla with a crochet or with the bent finger. (*c*) We had added hereto an exceptional case of paralysis produced by the compression of the neck caused by the windings of the umbilical cord around it.

Second—In the pelvic presentation: (*a*) When, in order to extract the head, the accoucheur puts his weight upon the shoulders; or when he takes the shoulder as a point of support whilst putting his finger in the form of a fork upon the nuchs. (*b*) When, the arms being above the head, we attempt to take them down.

Third—In shoulders presentation: When traction is made upon a prolapsed arm.

In all cases the paralysis of the arm is a radicular paraly-

sis of the brachial plexus, and almost always of the Duchenne-Erle type; very rarely it is entirely radicular.

Provoked paralysis is never fascicular; spontaneous paralysis is so, very rarely.

Paralysis of central origin by compression of the brain may give rise to a facial hemiplegia with integrity of the orbicularis palpebralis; it is not impossible that the same phenomena occur for the upper extremity; but there is no well-defined observation of cerebral paralysis of the arm clearly and certainly meriting the name *obstetrical* on record.

It is different with the lower extremities, and it can be advanced that every obstetric paraplegia is of central origin. A lesion of the spinal cord is the starting point. This may be produced by wrenching, by rupture, by compression, by fractured vertebra, or by intra-vertebral effusion of blood; finally by spinal hemorrhage.

As to the much rarer of ordinary hemiplegia, of alternate hemiplegia, they are certainly due to cerebral effusions occurring at the period of the accouchement; apparantly most frequently due to the compression of the spinal cord.

When we find ourselves in presence of a case of obstetrical paralysis it is necessary to make, as soon as possible, an electrical inventory. A more certain diagnosis can be made after ascertaining the manner in which the muscles reach. In this it is only a question of peripheral paralysis, the most frequent and the most clinical.

In all cases it is precedent to institute, from the outset, treatment by Faradic electrisation in order to re-establish the movements and to avoid the trophic troubles which may result from paralysis.—*Paris Médicale Union Médicale d' Canada.*

The Modern Treatment of Neuralgia.

BY LANDON CARTER GRAY, M.D., PROF. OF MENTAL AND NERVOUS DISEASES IN THE NEW YORK POLYCLINIC.

THE modern study of nervous diseases has modified many of the old ideas about the nature of neuralgia, and added many new details of great value in the treatment. For example, the time-honored saying that "neuralgia is the outcry of an impoverished blood," expressed only the incomplete knowledge of the older physicians of a time when the

vascular system was held to be the cause of all abnormal phenomena of the human body, and gives emphasis to what the later developments of science have shown to be only one of the many causes of neuralgia, and that, too, a very subsidiary one.

Before considering more immediately the subject of my paper, I desire to lay great emphasis upon the fact that distinction should always be made between neuralgia and neuritis. I scarcely need to remind your learned body that a peripheral nerve is made up of the axis-cylinder, a continuous nitrogenized body running from the central nervous organs to the sensory structures of the periphery; of a fatty sheath surrounding the axis-cylinder, and known as the medullary sheath, and, finally, of a delicate, transparent, connective-tissue sheath, enveloping both medullary layer and axis-cylinder like a glove, and designated as the sheath of Schwann. A neuritis, or inflammation of this peripheral nerve in these three structures—axis-cylinder, medullary layer, sheath of Schwann—causes structural changes which are visible under the microscope. These changes are manifold, and differ in degree according to the severity of the inflammation. In the lighter forms of neuritis the delicate connective-tissue sheath may alone be involved, so that its structure becomes somewhat thickened, and it loses its translucent appearance, becoming more and more opaque; the little cellular bodies, the nuclei, increase in number and size, and take up a greater quantity of the coloring matter which may be used, such as carmine of hematoxylin, whereas in health they are very sparse and not easily colorable. In the types of neuritis that are somewhat more severe, the fatty layer surrounding the axis-cylinder, the medullary layer, becomes implicated, and breaks up more or less into its consistent fat, so that it loses its even and continuous appearance, or is dissolved into irregular fatty chunks, or even into actual fat globules. Finally, in the most severe types, the axis-cylinder becomes altered in shape, or becomes partially or entirely disintregrated. The clinical symptoms indicative of these molecular changes, which are known by the name of neuritis, are:

First—Pain, which is steadily fixed in the distribution of the particular nerve affected.

Second—In the severer forms, a swelling of the region to which the affected nerves are distributed, the swelling being accompanied by a glossy and hot skin.

Third—Often by actual motor paralysis of the muscles to which the affected nerve is distributed.

Neuralgia, on the other hand, is a functional affection, which is unaccompanied by any signs of the molecular alteration discoverable in the nerve affected; and the clinical symptom which denotes this functional affection is pain alone, which may be mainly located in one nerve, but which almost invariably jumps at intervals from this nerve to others in the neighborhood, or to symmetrical ones upon the opposite side of the body.

It may happen, of course, that a long-continued neuralgia may lead to neuritis; or it may happen, on the other hand, that a neuritis of the sub-acute or chronic type may begin with symptoms of a neuralgic character. But the differentiation can easily be made as the disease progresses.

Although our knowledge of causation of neuralgia still lacks precision, we are yet cognizant of a number of etiological factors for whose possible existence in any given case we should carefully examine. We should always search for a history of malaria, and not only for a history of actually existing malaria, but for a history of preceding malaria. If an individual lives in a malarious district, and has distinct malarial attacks, with typical chill, fever and sweating, we are not likely to be thrown off our guard. But it should also be borne in mind, as is not generally known, that an individual may have been subject to malaria in the past, not have any rise in the temperature or chill or sweating in the present, and yet have a distinct periodical neuralgia left as a relic of the precedent malarial condition. For instance, many such cases of neuralgia will come on at regular periods which are just as exact in their arrival as were the full-fledged malarial attacks precedent to them, often in the distant past. All the treatment in the world addressed to this form of neuralgia between these periodical periods is worse than useless, inasmuch as it often aggravates the suffering; and yet they can usually be promptly cured when medicine is directed to them at the proper time. Then, too, the condition known as lithæmia is often the cause of neuralgia—*i. e.*, a condition in which the tongue is coated, the bowels are somewhat constipated, the patient complains of vertigo, various tingling, furry and abnormal sensations in the extremities. Lithæmia is a very frequent sequel to prolonged malarial infection, is often seen in malarious districts even when no distinct symptoms of malaria are present, and is a frequent phenomenon

in individuals who are personally or hereditarily of gouty or rheumatic tendencies. Atmospheric variations, which are so frequent in this American country of ours, constitute another fertile source of neuralgia. Uncorrected errors of ocular refraction occasionally set up neuralgia, such as astigmatism, hypermetropia, and myopia; although these causes are not nearly so frequent as certain of our writers would make them out to be.

In any given case, therefore, careful regard should be had to the distinction between neuralgia and neuritis, to a possible malarial infection, to a possible post malarial periodicity, to a possible lithæmia, to a possible exposure to great atmospheric variations, to possible errors of ocular refraction.

If malaria be present, it should be broken up vigorously by means of the usual treatment upon which I need not dwell, and in most cases the neuralgia will then disappear. If there be a post-malarial periodicity, the treatment should be addressed to the periodical attacks alone. Some six to twelve hours before the attack is expected, quinine sulph., gr. v—xx—or even xxx should be given, conjoined with morphiæ acetatis, gr. $\frac{1}{8}$-$\frac{1}{16}$, which latter had best be given hypodermically, if that be possible. If the individual be strong and robust, the breaking up of the periodicity will usually cure the neuralgia, and no further treatment will be needed. If the individual be not robust, it may be necessary to follow the treatment, after the periodicity has been broken up, by means of drugs which have been found useful in post-malarial sequelæ. The best of these are arsenic, best given in Fowler's solution, gtt. ii–iii, three times a day, and iron, preferable the tincture of the muriate, gtt. xx–xxx, three times a day.

If lithæmia be present, the patient should be put upon a mineral acid and laxatives. The best acid for this purpose is the dilute nitro muriatic, of which twenty drops should be given three times daily, before meals, in a wineglass of water, and this continued for two or three weeks. Laxatives should be used gently, so as to cause easy and somewhat liquid movements, but never to purge or to act with watery transudation. If the lithæmia be post-malarial, calomel, gr. i-ii, given at bed time, and followed in the morning, if necessary, with a small dose of a saline, may often be used with great benefit, provided that the patient be strong and hearty, but it should always be borne in mind that calomel may act very unfavorably upon the neuralgia if the patient be

weak or debilitated. In any event, the calomel should not be used more than once, or at long intervals. Usually the best preparation, if I may judge from a considerable experience, is the fluid extract of Cascara Sagrada. The great value of this drug is that it can be increased or diminished, according to the idiosyncracy of the patient, with absolute impunity, so that one patient may get all the desired effects from ten drops once daily, whilst another may have to take one ounce three times daily for the same purpose. My rule is to commence with one drachm doses three times a day, telling the patient that I want him only to have one or two easy liquid stools in the course of the day, and then let them regulate the dose for themselves. After this laxative and mineral acid treatment has continued for ten days or two weeks, it may be stopped, and a bitter tonic should be given in place of the acid, and the laxative should only be used accordingly as necessity may arise.

If the neuralgia has been plainly caused by some great atmospheric variation, or by a series of them, the patient should, if possible, be removed to a more equable climate, when it is seen that other treatment has failed.

The errors of refraction should be carefully corrected by means of glasses that should be adapted to the needs of the patient by some competent oculist, and not by the harum-scarum methods of the ordinary shop-keeping optician.

The neuralgia will cease in a certain proportion of cases upon the removal of the above causative factors. Should it not do so, however—and the neuralgic habit often keeps up after a perfectly adequate cause for it has been removed—or should it appear without any of these above-mentioned causes, our treatment must be directed to the malady itself; and then it is that we must make distinction between neuralgia of the tregiminus, of the sciatic, and of the nerves of the trunk and extremities, as each has peculiarities of its own.

In trigeminal neuralgia, defective teeth should always be looked for and carefully attended to; and in this form electricity seems to be of little or no use.

In sciatic neuralgia, the patient should be put absolutely to bed for a week or two at the commencement of the treatment, for we are dealing with a long and large nerve which is irritated by every movement of the extremity, and here we must carefully search, by a rectal examination, for a possible intra-pelvic tumor.

If these clinical differences be borne in mind, the treatment of these different forms may be the same. It may be laid down as an axiom that pain should be promptly checked until we have had time to directly treat the disease. In every case the affected nerve should be placed absolutely at rest. If the lower extremity or the trunk be affected, the patient should be put into bed and made to quietly stay there. It is utterly impossible to otherwise keep a leg or the abdominal muscles at rest. If an upper extremity be affected, it should be carried in a sling, and not used. The most effective drugs for the prompt relief of pain are antipyrin, antifebrin and the alkaloids of opium. In a large proportion of cases antipyrin and antifebrin will do all that morphia can do. Antipyrin should be given in gr. v doses every hour until the pain is relieved, or a maximum dosage of 40 grs. has been attained in 24 hours; but in using this drug, the heart should always be carefully examined, so as to avoid administering it in organic valvular lesions, and it should also be borne in mind that it is very depressing in its action in many cases. For this latter reason, antifebrin has of late come into use, because it does not depress; yet, I am sorry to say, antifebrin has not anything like the pain-relieving properties of antipyrin, although it is well to make trial of it in any case where antipyrin is contra-indicated. The antipyrin may be given in simple solution in water, and the antifebrin may be given either in pill or suspended in some mucilaginous mixture. Should neither antipyrin or antifebrin completely or promptly check the pain, resort must be had to morphia, unless the character of the patient is such that the morphine habit is to be feared, and even then it may often be given in such a shape that the patient is not aware of what is being taken. The form of morphia to be used will vary accordingly as the neuralgia is of the trigeminus of the extremities or of the abdomen. For abdominal neuralgia a combination of the sulphate of morphia with atropia is the best form, such as is combined in the hypodermic tablets put up by many houses and containing morphia sulph. gr. $\frac{1}{8}$ and atropia gr. $\frac{1}{200}$. For the neuralgia of the extremities and the trigeminus a solution should be made of the acetate of morphia, of such strength that each drop will contain gr. $\frac{1}{6}$, and this will keep best when a small quantity of carbolic acid is added to it. Either form of morphia is best administered hypodermically, although this is not absolutely necessary, and a dose should be gr. $\frac{1}{8}$-$\frac{1}{16}$.

Quinine and galvanism, when properly administered, will relieve pain quite as effectively as these analgesics, but they will do it much more slowly and gradually, although often more effectively. An occasional dose of quinine should be given at bed time, say gr. v in capsule, and this should be continued for two or three nights and then stopped, only to be renewed occasionally when their is a relapse.

Galvanism is the most effective agent that we have for the final relief of neuralgia of the trunk and extremities, although it does not seem to have much effect upon neuralgia of the trigeminus. To apply galvanism properly it is necessary to have a good battery, a measuring apparatus, and proper electrodes. There are a number of galvanic batteries to be had, but the most of them require to be filled so often as to be very inconstant in their current, and it is difficult at any time to know how much electricity is actually flowing. I consider the chloride of silver battery to be the best, most constant, and most portable that is made. A measuring instrument, graded into the electrical units which are known as milliamperes, and which is called a milliamperemeter, can now be had in this country of very excellent make, and is indispensable in determining the amount of current that is passing at any given time. It is impossible to give directions by indicating the number of cells, because the cells vary so much from day to day, accordingly as they have been filled or not, except in the case of the chloride of silver cells, which give forth a constant current for upward of two years without need of repair ; and even with this latter the varying conductivity of the skin in different individuals will allow a greater or lesser current to pass in one person than will pass in another. Nor is the sensation of the patient any guide as to the amount of the electrical current, because that sensation may be heightened or decreased in cases of neuralgia. We must therefore grade the current by one of these measuring instruments, one of the milliamperemeters, if galvanism is to be used with any precision. The electrodes should differ in size according to the part of the body galvanized. One pair should be about 5x6 inches, another one should be 4x2 inches, and a fourth one should be of round shape, of one inch diameter. These electrodes should be carefully covered with a fine, closely cut sponge, or with absorbent cotton, fastened with a small elastic band. Whenever they are applied, the skin should be well moistened with hot water, and the electrodes should also be thoroughly

saturated in this, in order to diminish the non-conductivity of dry skin and dry sponge or cotton. Furthermore, in order to apply galvanism properly, it is necessary to study the so-called "motor points" which have been mapped out of late years by electricians, and a chart of which can be found in any of the electrical text-books. These motor points, as is well known, are spots where the nerve-trunks or muscular nerve-filaments are most superficial and most readily attacked by the electrical current. Turning on a current from ten cells, one of the larger electrodes should be placed upon the skin, moistened as above, at some distance from the motor point of the affected nerve, and then a smaller electrode, the one of three inches diameter, should be gently and gradually placed upon this motor point. If the current then be unfelt by the patient, it should be gradually increased until about ten milliamperes are seen to pass. Even if not felt then, it should not be pushed further; but if the patient has a painful sensation in the affected nerve from a lesser current, the strength of the current should be diminished so as to give no pain at all. The best spot upon which to place the large electrode not used upon the motor point is the sternum. The current should be passed for about five minutes, and every day, unless it is thought that every other day will answer the purpose. After the motor point has thus been treated, the two larger electrodes should be well wet with water, and one applied to the nape of the neck, whilst the other is put over the lower dorsal spine, the skin having first been well wet with hot water, and a current of ten to fifteen milliamperes passed for three times at the first sittings, then for five or ten minutes in subsequent sittings. In using these large electrodes, great care should be taken to first put one in place and then bring the other down upon the skin very gradually and carefully, so as to avoid any shock, and the same precautions should be used in taking them away. Often, too, it will be found very useful to apply one of the large electrodes at the upper part of the affected limb and the other at its lower part. The great advantage of galvanism is that it can be given in these doses for almost any length of time with perfect impunity, provided that care be taken in the manner indicated to avoid shocks from sudden interruptions of the flow of the current.

As the quinine and galvanism and the rest manifest their effect upon the neuralgia, the analgesics should be entirely removed, and at this stage of the treatment it will usually

be found extremely useful, unless the individual be full-blooded and red-blooded, to make free use of iron, best of the dialized iron in one drachm doses, three times daily, after meals, in half a teacupful of water. In young individuals, in the colder months of the year, cod liver oil may also be of great use.—*Daniel's Texas Medical Journal.*

Selections.

Antipyrine in the Head-Pains Associated with Eye Affections in Syphilitic Subjects.

THE discovery of the marked analgesic powers of antipyrine has naturally led to its employment in painful affections of the eye. Kazaurow (*Wratsch No.* 7, *Abst. Archiv. of Ophthalmology, Vol. XVI., p.* 89) obtained good results with antipyrine in all cases of headache or ciliary pain accompanying diseases of the eye; viz., in keratitis, corneal ulcers, glaucoma, headache after cataract extractions and foreign bodies in the orbit. In fourteen cases a single dose of one grm. was sufficient; in a few this dose had to be repeated (optic neuritis, sclerotitis). Ryerson (*N. Y. Med. Rec. Dec.* 1887, *p.* 813) found antipyrine useful in the pain of plastic iritis, acute glaucoma secondary to relapsing iritis, and in acute iritis. The usual dose was twenty grains. Post (*Amer. Journ. of Ophthalmology, July*, 1887) testifies that one drachm of antipyrine divided into three or four powders, one of which was given every two hours, gave him satisfactory results in various painful affections of the eye. Grandclément has especially recommended this drug by injection into the temple in the dose of twenty-five c. grms., dissolved in distilled water with one-half c. grm. of cocaine. By this means he relieved ocular and periorbital pain, lessened spasm and modified the inflammation of the eye.

The following cases are briefly quoted to illustrate its usefulness in relieving, not so much the inflammatory processes in the cornea and iris, but the head-pain which accompanied the eye disease under consideration. All of the patients were the subjects of either acquired or inherited syphilis.

Case 1. Francis L——, white, aged 43. Primary sore contracted five months ago. Admitted to the hospital for iritis of the left eye. In addition to the ordinary iritic pain he suffered from severe frontal headache, worse at night and

sufficiently acute to prevent sleep. Fifteen grains of antipyrine given at bedtime produced relief and, within an hour, sleep, followed after waking in the morning by a day of comfort. A repetition of the treatment on the following night yielded the same result.

Case 2. Maggie W——, white, aged 21. She was distinctly strumous, and, although syphilis was denied, the evidences of this disorder were not lacking. She was admitted to the hospital with relapsing keratitis and suffered severely from nocturnal headache chiefly in the region of the parietal bones. Fifteen grains of antipyrine dissipated the head-pain and was followed by sleep. The temperature before administration was 99.2°, one hour later 98.3°. Repetition of this dose on succeeding nights was followed by similar relief.

Case 3. Maggie S——, colored, aged 33. Married twice; by her first husband had one healthy child; by her second husband seven children, all of whom were prematurely delivered at about the seventh month. Admitted to the hospital with extensive necrosis of the frontal bone; the eyes watery and conjunctivæ slightly chemotic. For the past eighteen months has had severe frontal headache, worse at night, and intractable insomnia. Fifteen grains of antpyrine at bedtime caused free perspiration, relieved the pain, and produced sleep. She remained free from pain until the following night, when the dose was repeated with the same relief. This medication was ordered for the ten following nights and then discontinued as the headache had ceased to be a troublesome symptom.

Case 4. Timothy Mc——, white, aged 24. One year ago contracted the primary sore. Entered the hospital for kerato-iritis, and also complained of severe frontal headache, which grew worse as the day advanced and by bedtime was so severe as to prevent sleep. Fifteen grains of antipyrine failed to produce relief; this was followed the next night by twenty grains, but again without result, except the reduction of a temperature of 99° to 97.3° in one hour. Active specific treatment was negative in its results as far as the head-pain was concerned; but when in addition to it fifteen grains of antipyrine were ordered the pain disappeared and did not return during his stay in the hospital.

Case 5. Mary W——, colored, aged 20. Entered the hospital with typical interstitial keratitis, painful nodes along the spine of the tibia and severe frontal headache, worse

during the night. Specific treatment relieved the eye symptoms, but failed to ameliorate the head-pain. The usual dose of antipyrine stopped the pain, threw the patient into a profuse perspiration, and reduced the temperture from 98.3° to 97.3°.

Case 6. Sarah K——, white, aged 31. Came for relief from a violent attack of interstitial keratitis; had scars at the angles of the mouth and typical Hutchinson's teeth. After the eye lesions began to subside under a course of mercurials, violent vertex and frontal headache began, usually at 12 o'clock, and increased in severity as the day advanced. Ten grains of antipyrine three times a day entirely cured this symptom.

Case 7. Mary D——, colored, aged 19. Entered hospital for typical interstital keratitis and violent paroxysmal attacks of general headache. The latter symptom was markedly relieved by fifteen-grain doses of antipyrine.

Case 8. Robert W——, colored, aged 24. Admitted with secondary eruptions and severe pain over the left eye and forehead which prevented sleep. Mixed treatment caused the eruption to disappear, but afforded no relief to the head and eye-pain. The latter was relieved by fifteen-grain doses of antipyrine. The temperature was reduced from 99° to 98°.

Case 9. Kate McB——, white, aged 27. Admitted for specific iritis of the right eye and intense pain along the right side of the head. The iritis rapidly subsided under the use of mercury and local blood-letting, but the usual doses of antipyrine were necessary before the head-pains disappeared.

Other instances might be quoted, but these are sufficient to demonstrate the value of antipyrine in the class of cases mentioned in this memorandum. In addition to the interest which is attached to the fact that the drug relieved the headache which occurred in connection with eye diseases in syphilitic subjects, it is also especially worthy of note that this amelioration was obtained when the ordinary specific treatment was without avail. Again, it is noteworthy that both the antipyrine and the specific teatment independently of each other, as in case 4, were ineffectual, but when administerad in conjunction with one another the desired result followed. One of us (*American Jour. of Ophthalmology, Dec.* 1887,) has observed a case of syphilitic headache which ascending doses of iodide of potash and the free use of

bromide of potash failed to cure, but which was quickly relieved when antipyrine was substituted for the bromide.

The antipyrine may be exhibited in ten-grain doses three times a day, but probably better results follow its use when given at bedtime in a single fifteen-grain dose, provided that the night is the season of severest pain. With the method of Grandclément we have had no experience. — *University Med. Mag.*

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Laceration of the Perineum of the Cervix.

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

BY WILLIAM GOODELL, M.D., PROFESSOR OF GYNÆCOLOGY, UNIVERSITY OF PENNSYLVANIA.

Gentlemen:—The first patient that I shall bring before you to day is a married woman, 30 years of age. She has had two children, the youngest being four years of age. She comes complaining of pain in the head and stomach, cold hands and feet and frequent micturition. These are usually nerve symptoms, yet I shall at once proceed to a digital examination:

The first thing that I detect is a tear of the perineum extending down to the sphincter. There is also a tear on the right side of the cervix. It may be that in one of her labors the head was in the right occipito-posterior position. She, however, states that in neither of her labors were the forceps used. Tears of the perineum will occur, whether the forceps be used or not, but we find in the majority of bad cases of laceration of the perineum, that the labor in which the accident occured, was an instrumental one. My advice to you in the use of forceps, is to boldly apply the instrument in those cases in which you consider it necessary, and bring the head down to the perineum. When the perineum begins to bulge, remove the forceps and let nature complete the delivery. By following this course, you will rarely have a serious tear of the perineum, and if it should occur, you will not receive the blame for it. As I have

already stated, I think it probable, that in this case the head was in the right occipito-posterior position, and it may be that the occiput did not rotate anteriorly. This would be extremely liable to cause a tear of the perineum.

Let me in this relation, repeat what I have said on former occasions in regard to the use of forceps. Such an abuse of this instrument prevails, especially among young practitioners, that I sometimes think the dictum of a noted French obstetrician, who himself had invented an excellent forceps, "that the forceps in the aggregate has done more harm than good," is a correct one. When one considers how many children have been greatly injured or even killed by compressions with the forceps, and how many women have had their soft parts torn and lacerated by injudicious traction, the brief legand, "*Take care,*" would, it seems to me, be a good one to engrave upon each handle of the forceps. It does, indeed, require skill, care and judgment on the part of the physician to use the forceps, and especially to complete labor with it. An inexperienced physician, or one demoralized by a long and tedious labor, may use undue power or exert traction in the wrong direction and thus cause a laceration of the perineum. It is for this reason that I advise you to remove the forceps when the head reaches the perineum, unless there exists some special reason for permitting it to remain. Occasionally a bad tear of the perineum occurs in a breech case, from the fact that the physician, disregarding the curve of Carus, does not carry the body upward, as he should do, and the chin hooking over the edge of the perineum tears it.

In case you meet with this accident, what is to be done? The first thing is to discover it. Do not laugh at this remark, for I assure you, that in many instances, even of complete tear, the lesion has not been detected until days after the labor, when the bowels were first moved. After every labor you should pass the finger into the rectum and the thumb into the vagina and gauge the thickness of the perineum. When doubt exists, an ocular examination should be made.

If a tear be discovered the operation should be performed at once. After the placenta has been delivered, as many silver wire sutures should be introduced as are needed to cause accurate apposition of the parts. Each suture should be entered half an inch from the margin of the wound, then buried in the flesh, and finally brought out at a correspond-

ing distance on the other side. The lower suture should always enter below the angle of the wound and be buried in the recto-vaginal septum. The ends of the sutures should be secured either by twisting or by clamping with shot. During the closure of the wound all clots should be removed and the parts thoroughly cleansed by the use of injections of an antiseptic solution. It is rarely necessary to give ether during the performance of the primary operation, as the parts have already been benumbed from the overstretching of parturition. This operation, when the tear into the rectum is a complete one, is not so successful as the secondary operation, on account of the wound being usually jagged, of the difficulty of promptly securing skilled assistance, and of the liability of the lochial discharge to insinuate itself between the surfaces of the wound. I have had three partial failures after primary operation, but in two of them the result was dependent upon other causes. In one of them the woman in a fit of insanity tried to throw herself out of the window, and the fierce struggle between herself and her nurse of course tore out the stitches. In the other, to which I was called by the attending physician, a violent diarrhœa caused by the secret indulgence in fruit, set in on the third day, resulting in a recto-vaginal fistula, which I subsequently succeeded in closing.

If after the removal of the stitches union has not taken place, it may still be possible to cause the laceration to heal by granulation. The wound should be kept perfectly clean, and a pice of lint dipped in a weak solution of choral—five or ten grains to the ounce—should be packed in the lower angle of the tear. By this means, the formation of a bridge of granulations may be induced.

This patient will require operation, but as she is not ready, some preparation being needed, it will be postponed for a time.—*University Med. Mag.*

Letter from Paris.

From the Correspondent of the *Journal.*

At a recent meeting of the Societe Medicale des Hôspitaux, Dr. Gaucher made an important communication on the treatment of diphtheria. He stated that the false membranes being the source of infection, should be removed, their site being painted with a concentrated solution of car-

bolic acid and camphor, in alchol, to which is added some olive or almond oil. The following is the formula of the solution he employs: Crystalized carbolic acid 10 grams, camphor 20 to 30 grams, alcohol 10 grams, the whole to be dissolved, and to this is added an equal quantity of oil. The strength may be varied according to the severity of the malady. The essential point of the treatment consists in the topical application of a caustic solution which is at the same time antiseptic, after the removal of the membranes. The latter is effected by vigorous rubbing with some cotton wool wound round a slender piece of wood, which has to be repeated morning and evening. Some of the members present observed that it was too difficult and painful an operation for the author to entertain any hope of its being adopted in practice.

Dr. Perron, of Bordeaux, made a communication to the same Society on the advantages of sprays of solutions of cocaine in various bronchial affections. Under the influence of a two per cent. solution of cocaine which is used in the form of a spray, the most violent fits of coughing are arrested in a few minutes. Phthisical subjects who are troubled with coughing and consequent insomnia at night, experience immediate and durable relief from this treatment. By this means opiates which are always more or less injurious after a time, are avoided. In acute bronchitis the action of cocaine is as advantageous. A notable modification takes place in the state of the pulmonary mucous membrane, and owing to the insensibility thus produced, the inflammation and the secretion are diminished. About ten or twelve inhalations, practiced by means of the spray-producer placed near the mouth wide open, suffice to bring about prompt and satisfactory results.

In his thesis for the doctorate, Dr. H. Lorain, of Nancy, treated of hot water in obstetrics. The author explained that hot water at a temperature of 45° to 50° C. is an energetic stimulant of the smooth muscular fiber. It also has an action on the blood-vessels, manifested by an immediate and persistent contraction of the vessel, or by a momentary dilatation followed by contraction. These two physiological facts explain the therapeutic effects so evident which these hot injections of 45° to 50° C. exercise on the uterine contraction. It is by their stimulating action on the uterine fiber that these injections constitute an oxytocic means so efficacious and so useful during labor. It is the double action exercised

by the hot water on the fiber and the vessels which explains its efficacy as an agent of hæmostasis. Hot injections should be preferred as hæmostatic to cold injections, as cold water has an action less energetic on smooth fiber and, moreover, the vascular contraction due to cold might be followed by a reaction with paralytic dilitation, whence it may happen that the hæmorrhage, arrrested momentarily, reappears with more intensity.

Dr. Redard lately read a paper at the Societe de Chirurgie on the treatment of erectile tumors by means of electrolysis. The author accords to this treatment a superiority over the other means generally employed. He entered very fully into the mode of operation, and employs electrolysis only once in six or eight days. After the first application the tumor hardens ; after the second, the morbid production presents important modifications. The apparatus he employs consists of a battery of continued currents, a galvanometer of intensity well graduated, needles in gold or in platinum, of half a millimetre in diameter and from eight to ten centimetres long. The operation may be performed by three ways of introducing the needles into the tumor: 1. By penetrating the morbid product with the positive and negative needle, at a short distance one from the other. 2. To introduce the positive needle alone into the tumor, the other pole of the battery fixed in the form of a plate on any part of the body. 3. To introduce the negative needle alone into the tumor. The current employed should be from 15 to 18 milliamperes. In order to avoid all hæmorrhage, before withdrawing the needle or needles, the current should be reversed for a few seconds and brought to zero. The needle or needles should be removed only when no resistance is experienced. The author concludes his paper by the following propositions: 1. Electrolysis is the method of choice in the treatment of erectile and cirsoid tumors. It succeeds wherever the other methods fail. 2. It affords protection against all accident of sloughing and of suppuration. 3. It acts with certainty and precision. The puncture with the positive needle alone should be recommended in the majority of cases.

In a paper to the Medical Society of Anvers, Dr. Bedoin writes on the advantages of borax and boric acid. He states: 1. The borate of soda or borax, and particularly boric acid, possess incontestable antiseptic properties, the activity of which is not so small as is generally affirmed. Both are

recommended for the preservation of alimentary substances, such as milk, butter, cheese, eggs, butcher's meat. But owing to its almost absolute insipidity, boric acid should, for this purpose, be preferred to borax, the savor of which is disagreeable; both are absolutely innocuous. 2. Interiorly, the therapeutic employment of boric acid as an antiseptic has already given very encouraging results, which are of a nature to authorize its administration in the affections where, till now, carbolic acid was almost exclusively employed; for example, typhoid fever. 3. Exteriorly, the serious antiseptic properties of borax and particularly of boric acid, justify the generalization of their employment in surgery; notably in the practice of dressings after the method of Lister, also in certain affections of the urinary organs, of the eyes, ears, and of the skin.

At the Societe de Biologie, Dr. Quinquaud read a note for Drs. Artaud and Butte on the pathogeny of diabetes, in which the authors notice the organic alterations consecutive to neuritis of the vagus nerve. These alterations involve the greater part of the viscera; intestines, pancreas, stomach, liver, kidneys, etc. They are of the same nature which are observed in diabetes, and are accompanied by functional troubles which charcterize this malady. A. B.

The Doctor's Social Position.

NOT until recently had we suspected that there was any question as to the doctor's precise social position, and it is with some feeling of condescension that we celebrate reflexly in response to the highly distressing letters upon the subject that has lately erupted, over across the sea.

In the first place we would ask, What is social position? And a question in sequence would be, Which doctor?

The naturalist coming to us from a foreign planet, would find on this earth a fine collection of civilized vertebrates who stamped themselves, "Special creation," with one of God's discarded seals some few hundred years back; and on examining the species—known to the laity as *homo sapiens*—he would find that, in some household groups, the power given by certain combinations of health and wealth had enabled them to acquire the contributions of art, sceince, and literature to such a large extent that members of these families were readily accorded first social position.

They would also find that occasionally members of other groups, powerful through wealth, but somewhat lacking in graceful mental attributes, were allowed high rank; and he would find in the purest and best society, a few of the contributing artists, scientists and men of letters.

The social specimens who are most nearly perfect do not work, allowing us to use the word in its ordinary meaning, and further, they rarely breed.

The perfect rose trained for beauty through many generations has gradually lost its ovaries, the staminas have slowly developed into petals, and the beautiful, barren thing which now delights our senses, can easily hold first social position among the flowers.

In the groups of perfect social specimens of man we do not look for minds of the first-class possessing creative genius; nor for those of the second-class with inventive talent; but we see abundant examples of third-class minds, or those possessing the power of adaptation and co-ordination to a high degree. Emerson says that we find here a perfect nose and there a perfect finger, but nowhere a perfect man, and in this he is, of course, correct, but we are acquainted with a good many examples of man who have reached a charming degree of social completeness. Lower forms of social specimens are more abundant however. At the bottom are the powerless who are unwilling or unable to work. Then we have the day laborer, who turns the greater part of his potential energy into striped muscular-contracting force. Above him is the clerk, who works methodically at his master's bidding; and then comes the mechanic, whose inventive talents make him a most useful member of society. The scientist with creative genius is a rare and noble member of society, and the particular lawyer, clergyman, or physician who adapts finely from the contributions of better artists and scientists than himself, holds a better social position perhaps than that which the contributors hold.

In inquiring as to the social position of the physician, it is necessary to avoid the common impression that the profession makes the man, and thus, after selecting some given specimen, we can freely examine his attributes. It will be found perhaps that the physician has cultivated the powers which lead to social perfection to such an extent that his value as a doctor has become very much depreciated; or, on the other hand, he may have been so much in love with the science and the art of his profession, so well satisfied with

his high cast motives, and so much pleased with the character of his sensations as a physician, that he cares not to develop into an ornamental social specimen. He enjoys admiring rather then being admired, and he thinks it more blessed to give than to receive. Meanwhile he retains quite a good deal of his human nature.

The character of a physician's work is such that he is brought constantly into contact with art, science and literature, and if his powers for work and for adaptation are large, and if he possesses sufficient wealth to enable him to make advantageous moves and he has the inclination to make such moves, he will of necessity hold a prominent social position.

If he is lacking in wit and understanding, he can not pull hard enough upon the diploma on which he stands to lift himself above inferiority. It so happens in this free country of ours that almost any man is given social position to correspond with his general mental ability, and when one of our American physicians not long since shook the hand of a king with a hearty grasp and said that he should think he would be d——d lonesome at being king all alone, and that in our country any man was a king—the royal host turned to the potentates about him with a laugh and said that such an expression of sentiment was as refreshing as champagne.

As a matter of fact, the doctor of great social worth stands upon a plane which allows him to enter exclusive social circles in our country; but we are sorry for the physician who wishes to become a highly colored member of society if he would at the same time retain his full degree of usefulness in the profession.—*New England Medical Monthly.*

British Medical Association.

(Special Report for the *Medical Record.*)

Fifty-sixth Annual Meeting, held at Glasgow, Scotland, August 7, 8, 9 and 10, 1888.

WEDNESDAY, AUGUST 8TH—SECOND DAY.

DR. MCCALL ANDERSON delivered the President's address. After thanking the members of the Section for the honor of his election, he proceeded to the consideration of the

DIAGNOSIS AND TREATMENT OF SYPHILITIC DISEASE OF THE NERVOUS SYSTEM.

He quoted from an author in one of the journals, who had

said that the majority of cases of syphilis in modern times were mild, and required but little treatment. This he considered as an error, for it was this way of looking upon syphilis as a trifling affair that led to the disease being often almost untreated, whereas, if powerful treatment were used from the first, many patients might be saved from death in after-years from the effects of cerebral disease caused by it. He based what he was about to say upon twenty-four cases which he had collected. When a case of cerebral disease came before the practitioner, he had to make out the diagnosis. This would have to be founded: 1. On the history of the case. 2. On a careful examination of the cutaneous surface of the patient, and on a search for scars or defects in the fauces. Many persons do not like to admit that they have had syphilis, and in many cases they have forgotten all about the early history of the disease, because the infection took place so long ago. Again, cerebral syphilis might be due to hereditary syphilis. In such cases tubercular eruptions or cicatrices had to be sedulously looked for. He had notes of cases where the primary lesion was present thirteen, eighteen, or thirty-five years before the brain disease supervened. In one case of cerebral syphilis, in a man aged forty, he found that the patient had had seven healthy children. He was in a deplorable state, with four sloughing bad sores, when admitted into hospital. He had no history of syphilis, and only presented a rather sallow tinge of countenance to cause a suspicion of the disease. And yet the exhibition of a drachm of mercurous oleate in inunction rapidily restored him to comparative health. Another point in diagnosis was the presence of neuralgia, especially when of an intermittent type, occurring only at night. Sleeplessness was a frequent concomitant of this symptom. Next, the appearance of sallowness was likely to be a possible sign of the disease. The questions of age and sex were all-important. Of twenty-four cases of the disease twenty were men and four women. At or before middle life was the time when syphilitic paralysis most often occurred. Dr. Baffard was right when he said that, excluding a few other causes, syphilis was, at that period of life, by far the commonest cause of hemiplegia. Genuine epilepsy came on in childhood, but syphilitic epilepsy supervened in manhood. Next, the effect of occupation was interesting, and learned persons were said to be more liable to cerebral syphilis than unlearned, yet there was a great deal of syphilitic cerebral disease among the working classes.

A most important point in diagnosis was that various lesions were often combined in syphilitic cerebral cases. Thus, one man, aged thirty, had diplopia, epilepsy, and left hemiplegia, and also nocturnal neuralgia. The symptoms in cerebral syphilis were very variable in appearance. Thus a gentleman, in 1886, aged thirty-eight, had first of all slight difficulty in articulating, and numbness of his left foot. Then he could not spell, and became quite aphasic. In this case iodide of potassium did no great good. It appeared that thirteen years previously he had had a hard chancre. He improved greatly under the use of inunction of oleate of mercury. The psychical condition of the patient was an important feature in the diagnosis. The presence of gummy tumors might cause epileptic attacks, and irritability of temper, and insanity might come from occlusion of the arteries. One of the cases was that of a man, aged twenty-nine, who had a dazed and stupid look. He remained unconscious for fifteen minutes on one occasion, and exhibited anæsthesia. There was no history of syphilis, but the inguinal glands were enlarged, and it seemed that four years previously he had had some anomalous symptoms. Mercurial inunction, carried out for thirty days, did this man a great deal of good, and he recovered from the attack. General paralysis of the insane showed, on post-mortem examination, nothing beyond the signs of repeated hyperæmias, and might be caused by syphilis. Where the spinal cord was attacked by syphilis, spinal paralysis ensued.

In 1887 a woman was admitted into hospital who had persistent diarrhœa and retention of urine, which symptoms had lasted for five months. She had constipation, lightning pains, and tenderness over the dorsal vertebræ. There was loss of vision of one eye and the tendon reflexes were abolished. In 1886 girdle sensation was felt as high as the clavicles, and there was almost total anæsthesia. The sexual appetite was absent. Her husband was a soldier, and she had had an abortion soon after her marriage some years before. This patient improved greatly under pot. iod., gr. x., twice daily, and the anæsthesia disappeared. She was then treated with mercury, and was restored to health. The next point in diagnosis was the occurrence of loss of sight or other eye affections. The third and fourth nerves were those most commonly implicated. It had been said that thirty per cent. of all the cases of iritis were syphilitic. The occurrence of minute gummata in the iris was pathognomonic

of syphilis. The disease might have a deep hold on the system and cause dimness of the retina or complete destruction of the vision. As to the

TREATMENT OF SYPHILIS,

whenever doubt was possible the patient should get the benefit, and be treated with specifics. Of course, even then the treatment may do no good, as it might be far too late to be of service. In all suspicious cases, mercury should at once be administered. Iodide of potassium was sometimes of great service, given in very large doses, *i. e.*, as much as a drachm when necessary. The subcutaneous injection of a weak solution of corrosive sublimate was often a useful way of giving mercury. Mercurous oleate was an excellent remedy, although a little dirty. When mercury was injected, it was as well to freeze the skin first and inject a little morphine before the mercury. The mercurous oleate was best prepared without heat. This plan often removed syphilitic skin diseases with great rapidity. Finally, cases of locomotor ataxia were sometimes syphilitic and curable by mercury. A gentleman, aged forty-three, in 1885 suffered from this disease, arising from syphilis, and had been rapidly cured by inunction.

Dr. Drummond said he had made a considerable number of post-mortem examinations of patients who had died of the effects of

CEREBRAL SYPHILIS,

and had met with meningeal cloudiness at the base of the brain, with various vascular lesions. There was a peculiar variety of arteritis, the nodular, which he had noticed occasionally; this lesion affected also the retina. Gummatous affections of the pia mater might occlude the vessels. He thought that perhaps the most common affections were gummy tumors of the brain, with super-added meningeal inflammation. Insomnia and headache at night were frequently symptoms accompanying cerebral syphilis; but it was too frequently assumed that headache must accompany cerebral syphilis. This was not so. It some cases headache was produced; in others, that symptom was entirely absent. There was often no history of syphilis in cases in which the disease had evidently been the cause of the cerebral symptoms. A gentleman, aged thirty-seven, suffered severely from neuralgia, but was in other respects in very good health.

Suddenly he became aphasic, and lost consciousness. He soon after had right hemiplegia, with complete aphasia. There was, however, some mention of the patient having suffered five years before from neuralgia of the fifth pair of nerves. With respect to treatment, mercury and iodide of potassium together were often required.

Dr. Grainger Stewart introduced a patient, a woman, aged forty-eight, who had suffered for fifteen years past with

A SINGULAR AFFECTION.

There was no avowed history of syphilis, but she said that she had once suffered from rheumatic fever which had lasted for six months, and from ptosis and from polyuria, with fits of giddiness and transient paralysis. These were all probably syphilitic. She had at present good health in other respects, and there were no other nervous symptoms beyond the following very remarkable one, which was that, being blind in one eye, as soon as she closed the other eye she at once became unconscious, her head fell, and she had stertorous breathing. There was a limited field of vision in the eye that retained some power of sight. She had been blind in the right eye for sixteen years, and posterior staphyloma was seen, with paralysis of the motores oculi of that eye. Even the shutting off of the sight of surrounding objects, by bringing a piece of paper near the eye, produced this curious symptom. When in this unconscious condition she could be even pricked with a pin without feeling the prick. Even pulling down the blinds of the room would set her off. She was forced to go to bed with a candle burning, otherwise she would fall down and injure herself if the light was extinguished as she walked toward the bed. Dr. Stewart had watched the case for sixteen years, and during all that time she had never had any epileptic seizure, and no other illness of a nervous kind except the one described. He feared that a scar was present on some part of the brain, for no remedies had any power in removing the symptom.

Dr. Ross, of Manchester, characterized this as a most unique and puzzling case. It was not hemiopia. In one case of cerebral syphilis seen by him, polyuria was a symptom in company with paralysis of the motor oculi muscles of one eye.

DISEASE OF THE PITUITARY BODY

situated below the optic commissure might produce such

symptoms. With regard to the diagnostic value of headache, much caution was needed in explaining this symptom. It was often due to cerebral syphilis; but this disease often exhibited no symptom of the kind. A patient of his had severe pain in the head at Christmas, and three months subsequently syphilitic paraplegia, which was followed by right hemiplegia and aphasia. He had then an attack melancholia. The early symptoms had occurred fifteen years previously. Dr. Ross then sketched the different nerve-centers of the brain, and gave his hypothesisas to the way in which syphilis gradually invaded one of these after the other. In many instances syphilis of the cortex extended along the vessels until it reached the fissure of Sylvius and the centers of speech. Thus, facial paralysis was sometimes the initial symptom, and this was followed by motor oculi paralysis. In the syphilitic affections of the cord the disease often commenced in the region of the lower dorsal or lumbar vertabræ and was followed by paralysis of the sphincters and loss of sexual appetite, with incontinence of urine and abolition of tendon reflex.

Dr. Clouston, of Edinburgh, spoke of

THE MENTAL RELATIONS OF CEREBRAL SYPHILIS.

He said that the most melancholy effect of syphilis was that it sometimes produced acute delirium during the secondary period. This resembled delirium tremens. The patient might die in fourteen days, after suffering from great mental irritability throughout the case and maniacal symptoms. Such cases were absolutely intractable. There was also brain-softening, independent of vascular lesions. The third form of cerebral syphilis was the commonest, and that was slow arteritis, which caused gradual starvation of a part of the brain. In such cases there might be no paralysis and no anæsthesia. Such patients began first to exhibit a want of moral feeling and impetuosity, with suspicious delusions and dementia gradually supervening. There was no headache at the commencement, but gradual starvation of the intellect. Lastly, there were the gross forms of disease of the brain which caused mental alterations. He asked the question whether syphilis could attack the neural tissue. It had been said by Dr. Hughlings Jackson that it could not, but the speaker was not quite sure of this, and thought that in some cases that tissue was affected by the disease.

Dr. Robertson thought that there was no disease of the

brain caused by syphilis corresponding with that which caused locomotor ataxia. He adverted to the difficulty which was often experienced in making out that a patient had suffered from early syphilis while he was presenting the symptoms of cerebral syphilis, and he mentioned the case of one patient who strenuously denied any infection of the kind, but on whose penis there was a large scar. Syphilis was especially a disease of the cortex, and therefore, in many instances, pain could be made a prominent symptom if only the patient's head were percussed. On doing so over a spot where there was some syphilitic inflammation, the patient would suddenly exclaim that he felt a dull pain over a circumscribed spot. With regard to treatment, all were now agreed that the use of both mercury and iodide of potassium was indicated in cerebral syphilis; but there was a point that was not often insisted on, and that was as to the value of local blistering in such cases. This was often of very great service indeed, where there was cortical inflammation, and in cases of cerebral syphilis, and also in cases of locomotor ataxia, percussion should be carefully used to map out the spot where the inflammation existed, and that spot should be frequently blistered. This relieved pain in a marvellous manner.

Dr. C. R. Drysdale said that the abuse of tobacco and alcohol seemed to him to increase the liability to cerebral lesions in those suffering from syphilis. Sclerosis and gummy deposits were what constituted the lesions in cerebral syphilis, whether affecting the dura mater, the pia mater, or the vessels of the brain. The lesions were usually seen at the periphery rather than at the center of the brain. The sphenoidal region is most often affected with encephalitis or softening of the brain. The prognosis is grave, because treatment is often begun too late, but some cases are permanently cured by energetic treatment.

Dr. Coghill mentioned a case in which a man suffering from cerebral syphilis was covered with rupia. He was aphasic. This gentleman was supposed to be one of those who were intolerant of iodide of potassium; but on putting him on large doses this was found to be a mistake. Thus, for eighteen days he took about six drachms daily of the drug, and this had a marvellously curative effect on his case.

Dr. Byrom Bramwell said it was rare to find gummata in the occipital lobes. Multiplicity of the lesions was of

great assistance in making out the diagnosis of the disease, and the age of the patient and sex were of service also. While it might be true that intellectual work might make the rich more liable to get cerebral syphilis, the poor were more subject to blows on the head and were often affected.

Dr. Dowse, of London, said that syphilis was a very different affair now from what it used to be considered twenty years ago. The vaso-motor system of nerves was often affected in syphilis. Dr. Jackson, indeed, spoke of the vessels being first attacked; but it must be remembered that these were under the influence of the organic system of nerves.

THE VALUE OF INHALATION IN LUNG DISEASE.

Dr. Theodore Williams said the question was, Whether our present methods of inhalation reach the different parts of the lungs as well as through the stomach? That substances could be thoroughly inhaled was proved by the fact that the nicotine of tobacco had been found in the urine. Warm, moist inhalations had not been successful in his own cases. The reason appeared to be that the air-passages are not adapted to absorb large portions of water even in the form of vapor. Another reason was the patient's inability to make deep respiratory movements, which would make it possible for the air to reach the alveoli. In regard to antiseptic respirators his experience had not been fortunate. Medical inhalations were most useful in the larger bronchi.

Dr. Andrew Smart exhibited some specimens of new respirators. He also explained the action of a new instrument for needle puncture.

Dr. Lindsay said his conclusions closely agreed with those of Dr. Williams. Inhalations were very valuable in diseased conditions of the pharynx and the larnyx, but very uncertain in affections of the lungs proper. He had tried steam without being favorably impressed by its effects. Persons who had been steamed generally remained susceptible to colds; but the real controversy on the subject of inhalation ranged around phthisis. His results had been altogether negative. He had seen nothing hitherto to show that drugs so given could affect the seat of the disease. It was very doubtful whether they could destroy bacilli, and if they could, it was a question whether they would do much good. Our treatment should be rather to decrease the receptivity

and leave the bacilli alone. In phthisis the best method, to his mind, was to improve the general conditions by an improved mode of life, by diet, etc., and in proper cases by judicious changes of climate.

Dr. Ireland said he had begun to study the question of inhalation. It was a popular belief in Germany and other parts, where there were extensive pine forests, that the breathing of the air permeated with the odor of the pine was good for lung diseases. It was believed, moreover, that those who lived in the pine forests were singularly free from chest diseases.

Dr. Coghill had not found his expectations always realized in regard to inhalation. But, although he had not yet been successful, he was more convinced than ever that inhalation would yet play a very important part in the treatment of lung disease. Not the least of its advantages was the increase it gave to the respiratory act, the larger the amount of air brought into the lungs, and the expectoration was got rid of with greater facility. There were greater differences of opinion in regard to the various methods of inhalation. His opinion was that the oronasal method was not the best.

Dr. Smith referred to cases, not frequent in this country, of

HEPATIC ABCESS BURSTING THROUGH THE LUNG.

Many cases came to England from tropical countries, and in such cases he had obtained very great benefit from antiseptic inhalation. The effect had been to decrease the discomfort of the patient and to diminish hectic. There was a prevalent error that phthisical cases ought to escape from England. Such cases sent to India during the tropical rains ran a rapid course. To send such cases to India was one of the most fatal mistakes of practical medicine.

Dr. Dennison, of Denver, Col., said he thought it was impossible for the medicated air to get to the point desired. The inhalations went to the healthy lung, and not to the diseased one. The chief benefit of inhalation, to his mind, arose from the breathing of more air. The bacilli could not live in a dry climate like that of Colorado, and the important thing was to get the bacilli into such a climate.

Dr. Gibson recommended dry powder inhalation, and said important results were obtained by this method. In

this way a great variety of drugs could be employed in the most efficient manner.

Dr. Brett spoke of the necessity of getting the bad air out of the lungs. He exhibited a whistle which a phthisical patient had been recommended to use, and he was of opinion that it might be useful in making the patient respire. He quoted the remark of an old physician, that "not nearly so many persons would die if they would only expire."

Hicks (J. B.) on the Influence of Bodily Movements over Septic Absorption.

When, by the act of inspiration, the capacity of the chest is increased, a tendency to vacuum exists, which is corrected by two methods: 1st, by the ingress of air through the larynx; 2d, by the flow of blood through the various veins leading toward the heart; for, during inspiration, the normal support of these vessels, which exists during the pause preceding, is lessened, and thus the external air-pressure existing on the general vascular system immediately acts, and corrects the lessened tension by pressing the blood heartward.

When the diaphragm descends it presses on the contents of the abdomen, and these press correspondingly in all directions. And although the increased diameter of the base of the chest, to which the walls of the abdomen are attached, would tend to increase the capacity of the abdomen at the upper part, and thus lessen the pressure within the abdomen, yet their is a marked residuum of pressure during each inspiration.

So much for normal respiration. If, however, a sudden inspiratory movement takes place, voluntary or otherwise, before the depression of the diaphragm can occur, then, instead of their being a residuum pressure in the abdomen, there is a tendency to a vacuum. Again, if, by voluntary effort, or by any restraint, the ribs are unable to rise—in other words, the base of the thorax can not expand—then there is an increase of the preassure when the diaphragm decends; the usual condition resulting from tight-lacing, or the use of the belt. Laughing, coughing, and even sudden movements of other parts then the trunk, of the legs and arms, produce the same result, although to a less degree.

If the effect of a sudden inspiration be to produce a vacuum within the abdomen, as it does within the thorax, then its importance, as a possible source of danger, must be self-evident to any one who has studied medicine.

No doubt the elasticity of the abdominal walls and their yielding nature materially minimize the effects of the thoracic vacuum, yet it can readily be shown that it is not completely reduced, and, under some conditions, scarcely at all.

Where the abdomen is distended, the effect of inspiration or bodily movements is necessarily lessened.

Such a vacuum causes a corresponding sudden rush toward the chest in the veins principally; and doubtless also in the lymphatics; at the same time the outward current in the arteries would, by the same force, be checked. An opportunity would thus be given for lodgment of any clots which might have been formed in the veins. So also in the case of wounds, a facility is given for an unhealthy material to be drawn into the current throught the severed ends of veins or lymphatics, such as a portion of the plug, which might be purulent or ichorous. Doubtless in conditions of perfect health these accidents would generally be guarded against by the firmness of the plugs, and the absence of irritating matter; but in a wound in an unhealthy state, contrary conditions are present favoring the translation of portions of unhealthy plugs or of septic matter in a more fluid state. And if we admit the possibility of these things occurring, how much more are they likely to take place in the puerperal woman, or in other similar conditions, where every facility is given for the formation and increase of sepsis in consequence of the retention of sanious fluids at a high temperature scantily supplied with air, and where easy opportunity exists for its absorption through recently divided vessels of large caliber. Indeed, in practice I have, I think, had sufficient evidence to prove that vigorous movements of the puerperium have been important factors in initiating attacks of septic fever, and of renewing them during their subsidence. Unless I am much mistaken, the renewal of the attacks of rigors, fever, and sweating has been produced by such movements. At any rate, I have known cases where these attacks have followed each time the patient had been much moved—I mean by getting out of bed, sitting up, or changing room. So much has this impressed me by frequent occurrence, that on

seeing patients in consultation, with an account of renewals of shiverings, etc., I have made special inquiries, and found very frequently that these have followed those disturbances.

But if these conclusions are correct, another question will present itself to us. May we not, in manipulating the uterus freely charged with unhealthy fluids within, be favoring, unwittingly, septic infection, especially if the patient has been already under its influence? That this is probable seems to be borne out by the fact that I have observed in many cases where I have been obliged, in conseqence of hemorrhage or fever, to move from the interior of the uterus retained portions of placenta and firm clots; indeed, I look forward to a slight increase of fever after these manipulations. The sudden removal of the hand after firmly pressing in the abdominal walls might, it appears to me, somewhat favor an indrawing.

There is another circumstance in the puerperal state which can also favor septic absorption from the inner surface of the uterus, namely, the sudden turing on the side from the back. At this time the walls of the abdomen are very often relaxed aud flabby; so that when the patient rolls over on her side, the abdomen and uterus fall over in a marked degree if unsupported; and thus there is a tendency to a vacuum determining a flow toward the abdominal cavity. If any one doubts this tendency, he has only to place a woman with relaxed parts and flaccid abdominal walls in the knee-elbow posture and open the vulva with two fingers, and he will at once perceive that the inrush of air is very marked. We take advantage of this fact in our attempts to restore the retroflected pregnant or heavy uterus.

But the principle which underlies these facts does not belong to the puerperium, but to all cases under like conditions in abdominal and gynecological surgery. Theoretically, we may say that by mechanically checking or restraining the elevation of the ribs and abdomen by a bandage, we in a very considerable degree lessen the risk attending rapid and sudden movements.—*Am. Jour. Med. Sci.*, July, 1888.

Shall Venesection be Revived?

In a letter to the *Medical World*, July, 1888, Dr. G. W. Kemper, of Port Republic, Va., says:

And article on Blood-Letting in February number of the *Medical Analectic*, accords so well with my views and experience that I deem it proper to add a few reflections corroborative of the views therein given. About the time of my graduation (1836) the doctrine of Broussais on the subject of fever was generally received, and, though a change of sentiment soon took place in regard to his views on the etiology of fevers, yet he gave utterance to a sentiment which indicates the manner of treating inflammatory diseases at that period, and which practice continued for many years subsequent to that time without any doubt as to its propriety. The sentiment, "The fear of debility has slain its thousands," to which he gave utterance, may have reduced the too free use of depleting remedies, and, as a consequence, may have led to the opposite extreme in the treatment of disease.

Anxiety to discover and adopt new remedies led many of us to give up old and reliable ones for novelty or fashion's sake. The result has been a grave disappointment when submitted to clinical test, although the remedies were recommended by those in whom we have confidence.

That the type of diseases has undergone some change, though the cause is inexplicable, I feel disposed to admit, and an experience running back half a century I think justifies an opinion. I don't remember having treated a cases of pneumonia or pleurisy during ten years of my early practice without venesection, nor do I remember to have lost but one patient out of a considerable number. Though so successful with bleeding during that period, in 1847 there was an epidemic of pneumonia in this vicinity, almost exclusively among the negroes, and the type so changed from what I had formerly seen that bleeding was regarded as inappropriate, and all save one (some thirty in number) recovered by cupping, blistering, and tartar-emetic in pill and oft repeated doses.

Since that time a very large percentage of cases of pneumonia have not required or justified venesection, yet I meet with cases now and then in which I regard bleeding as imperatively demanded.

I remember a case a few years ago of a violent attack in which pain and dyspnœa were distressing. Having no doubt of the most energetic, prompt, and reliable remedy, I drew blood to the amount of twenty or more ounces, with a success far beyond my expectation, for, without any other remedy of consequence, the disease was aborted, and the third day the patient returned to his duty as stable-boss at the iron works. Such decided results may not generally be expected, though I have known other physicians to have similar experience. In further proof of the efficacy and value of this remedy, the relief and comfort of the patient fully attest.

Some years ago the subject of pnuemonia was discussed at a meeting of the American Medical Association, and I was surprised at the diametrically opposite views upon the subject of venesection in that disease by gentlemen of national reputation, and decided that their practice was in accord with the theory they entertained in regarding debility as the greatest source of danger in that disease.

It is a question of some import to decide whether the remedies used for the cure of this disease or the disease itself are more potent factors in producing debility. While I admit that both have such tendency, with due deference to the opinion of others, I must say that, in a large majority of cases, the debility and depression result more from the disease, and if by depletion we can, with reasonable prospects of success, modify or cure the disease, we have no cause to fear the danger of such depletion.

It might be inferred that I am an advocate of the almost indiscriminate use of the lancet. Such, however, is not the fact; but whenever the heart-beat and fever in my judgment indicate bleeding, the fear of subsequent debility has no terror for me, but rather fear that the excessive arterial action may produce that which is so dreaded,

During the bad weather in February last pneumonia was prevalent here. Though an advocate for venesection, I did not regard these cases as requiring that remedy, though I believe the bleeding would have been successful. I treated some twenty cases with the new remedy, antifebrine, with little else than hot fomentations, and after subsidence of fever, blistering, without the loss of a single case. The most critical, was a lady some three months *enciente*, with whom abortion occurred the second week.

Notwithstanding the discovery of new antipyretics, and

the favorable action of the remedy named above, I would never be willing to give up blood-letting, which in proper cases will do more in twenty minutes than any other remedy in that many hours. That the recent discovery of so many antipyretics will obviate the necessity of bleeding in many cases, their can be no doubt. But the idea that any thing yet discovered will equal or compare with the abstraction of blood in cases of high fever and congestion, seems to me untenable, if not preposterous. While I admit that venesection may have been used in former times without proper discrimination, and for which there was some excuse, not having the benefit of recent discoveries to produce the same end, I am equally confident that we greatly err in denouncing this remedy as needless, if not dangerons, and educating the young practitioners in that belief. That the imminent danger from bleeding is a phantom of the imagination, I think would be sustained by a large majority of old practitioners, who have had ample experience to know whereof they speak.

Reed and Carnrick's Soluble Food.

In the *Boston Medical and Journal* of August 2, 1888, was published an analysis of Carnrick's Soluble Food, copied from, and credited to, the Report of the New Jersey Dairy Commissioner.

Dr. Newton, the Commissioner, has forwarded to us a circular, recently issued, bearing upon the same subject, to which it is necessary we should, in common honesty, give equal publicity to that given the first quotation. The circular is as follows:

STATE OF NEW JERSEY.
OFFICE OF THE DAIRY COMMISSIONER.
PATERSON, N. J., Sept. 19, 1888.

In the report of this Department to the Legislature for the year 1887, as an article by Prof. A. R. Leeds, entitled "Foods for Infants and Invalids," was published.

Messrs. Reed & Carnrick have, in a communication to this office, taken exception to some of the statements therein made, claiming that the amount and character of the ingredients of their food preparations were misrepresented. In order that these gentlemen might receive full justice, I offered to have the analytical work revised by a chemist of

reputation, who had never had any business or professional relations with either the State or Reed & Carnrick; and it was also stated that the results of this series of analyses would be published by this office.

Accordingly, Prof. Elwyn Waller, Professor of Analytical Chemistry at the School of Mines, Columbia College, New York, was requested to purchase a package of "Carnrick's Soluble Food" in the open market, analyze the contents thereof, and report the results to me. Below is a copy of his report.

"I examined a sample of 'Carnrick's Soluble Food,' (purchased by myself from Eimer & Amend). I find that 38.26 per cent. of the albuminoids which it contains are in the soluble from.

"The sample also gave readily the biuret reaction for peptones. I failed to detect in the food, when moistened, any of the 'hard, unchanged particles of casein,' which it has been asserted that it contains.

"My results lead to the conclusion that the casein in the preparation has been partially rendered soluble by the action of the digestive ferment as claimed by the manufacturers."

(Signed) ELWYN WALLER, PH.D.

I append herewith a letter on this subject that I have received from Prof. A. A. Breneman, S.B., formerly Professor of Chemistry at Cornell University, now analytical chemist at 97 Water Street, New York.

WM. K. NEWTON, *Commissioner.*

NEW YORK, September 18, 1888.

DR. W. K. NEWTON, *State Dairy Commissioner of New Jersey.*

Dear Sir—The report of your department for the year 1887, refers to certain preparations made by Reed & Carnrick, of New York, in a way which, from my knowledge of their work, seems to do them injustice.

The statements to which I especially refer are:

(1) That the milk solids in the preparation known as Carnrick's Soluble Food contain merely the dried casein of the original milk, neither changed nor modified by any process of digestion.

(2) That the analysis of this food given in the Report of the State Board of Health of New Jersey for the year 1885 correctly represents it, giving as it does only 10.25 per cent. of total albuminoids.

(3) In the analysis of the preparation known as Liquid Peptonoids (New Jersey State Dairy Report, 1887) the proportions of alcohol and albuminoids there given are made the basis of comments which are extravagant in language, and unnecessarily severe.

On February 20, 1888, I made, at the request of Reed & Carnrick, a test of the peptonized milk received in good condition from their factory. Of the albuminoids of the original milk 46.6 per cent. were found to be rendered soluble (that is, no longer precipitable by boiling or by acids). Through the process of digestion such soluble nitrogenous matters must, under the circumstances, consist of peptones, albumoses and caseoses, products of the modification of the original albuminoids of the milk by digestion.

Having made many analyses of this food during the past three years, I have never found the proportion of albuminoids to run below 16.5 per cent. as determined by combustion with soda lime. The average of fifteen analyses, made since January 1, 1887, shows 18.96 per cent. of albuminoids. These results also agree well with the analyses of the same food made by Stutzer and other well-known chemists.

As to the liquid peptonoids, the proportions of albuminoids is limited only by the quantity which can be kept unchanged in solution. Sixteen per cent. of alcohol is necessary to prevent decomposition of the albuminoids, and no quantity greater than three per cent. of these can be held in solution in this liquid. Many attempts have been made to accomplish a better result, but in all cases the excess of albuminoids was deposited after a time, or (with reduced proportion of alcohol) decomposition of the albuminoids occurred.

Very respectfully,

A. A. BRENEMAN,

Analytical and Consulting Chemist.

EPILEPSY.—The following is a favorite prescription, especially in epileptics with weak or irregular heart action:

℞ Zinci valerianatis, . . . ℥ i.
Ext. belladonnæ, . . . grs. vi.
Pulv. digitalis, ... grs. vi.
M.—Ft. pil., or caps. xx. Sig.—One three times a day.

Microscopy.

THE TUBERCLE-BACILLUS.—According to Powell, the life-history and potentialities of the tubercle-bacillus are as follows:

It is a minute rod-shaped fungus, measuring from 0.003 to 0.0035 millimetre in length, and about one-third that measurement in thickness. The rods are straight and slightly curved, with rounded ends, and often enclose bright, spherical, spore like granules of uniform size, arranged in linear series, and separated from one another by haline intervals. After having been stained with methyl blue, fuchsin, or magenta, and then washed in nitric acid, ten per cent., they retain the original dye, and are thus distinguished from putrefactive or other bacilli.

2. This organism is only capable of growth and multiplication under culture in blood-serum or animal broth, at a constant temperature of 30° centigrade. It is of comparatively slow growth (compared to other bacteria), and is unable to continue its development in decomposing fluids in the presence of more rapidly-growing bacteria (Koch).

3. All the conditions essential for the development of the bacillus are, so far as its life-history is known, alone to be found naturally in the animal body.

4. The bacillus is, however, of very tenacious vitality, and will preserve its virulence and capacity for development for six weeks or longer in decomposing sputum, for six months or longer in the dry state.

5. If a minute portion of bacillus containing matter be placed upon neutral culture surface, and allowed to germinate, and if a fragment of the product of germination be similarly cultivated on a fresh surface, and so on, for many generations, all foreign germs being excluded, the last product, if inoculated into an animal, will be as potent in producing tuberculosis as the first.

6. The bacilli, whether derived from free cultivation or from tubercle, if intimately diffused in water, and scattered in the form of spray through an atmosphere in which animals are placed so that they inhale it, will produce tuberculosis in them.

7. In the sputa of all cases of well-marked phthisis the bacilli are to be found.

8. In cavities in the lungs of tubercular or caseous pneu-

monia—*i. e.*, of phthisical origin—whether large or minute, bacilli are invariably to be found.

9. In caseous and catarrhal pneumonic consolidations of the lung, excepting in the immediate neighborhood of cavities, large or minute, bacilli are sparse and rather difficult to find; large fields of sections may be traversed without discovering them; yet this material is virulent in producing tubercle when inoculated.

10. In the granulations of miliary tuberculosis, bacilli are very generally, but not invariably, to be found, and often only in small numbers. In their most recent researches upon the artificial inoculations of Guinea-pigs with tuberculosis (bacilli-containing) sputum, Drs. Klein and Gibbes found that the tubercular lesions contained but few and in many instances no bacilli.

11. The result of inoculations with dry bacillus-culture, by Koch and many others, with the most minute precautions, have with much reason been accepted as proving the organism to be *per se* the virus of tubercle.

Gleanings.

Obstetrical Paralysis of the Arm.—A recent number of the *Bulletin Médical* contains some observations on this condition by Prof. Budin; they will serve to explain the real causes of the accident supposed to have befallen the present Emperor of Germany at the time of his birth. Paralyses of this nature are usually brought about by pressure of the fingers along the back of the neck during the maneuvers of extraction; or by pressure exerted by the obstetrical forceps. Such paralyses may even be produced in spontaneous delivery. It may be admitted that if the acromial diameter is exaggerated, the shoulders become compressed at their extremities and the clavicles—forced back, as they are—determine contusions of the branches of the fifth and sixth pairs. Diagnosis of obstetrical paralysis of the arm does not usually—in the days immediately following birth—present great difficulties; yet paralysis of this kind might be confounded with a fracture of the humerous or of the clavicle; or even with a luxation of the shoulder, if the latter could possibly be observed immediately after delivery. But an attentive examination should enable us to avoid error. Infantile paralysis never supervenes immediately after

birth; so we need not consider the matter at all. A paralysis of cerebral origin may be taken for a radicular paralysis of the arm, but careful localization of the symptoms should make the real trouble clear. In obstetrical paralysis of the arm, the prognosis is generally good; cure usually follows rapidly enough. There are cases, however, in which paralysis persists, and now and then becomes incurable. Several examples of this have been reported. In such cases progressive muscular atrophy takes place, not only of the paralysed muscles, but of other muscles of the arm, and, in consequence of inaction, extends to the muscles of the fore-arm. Also, under the influence, no doubt, of a predominance of action of the sub-scapular muscle—which draws the superior extremity of the humerous toward the trunk and induces a rotary movement within—a sub-acromial luxation may supervene. As spontaneous cure does not always take place, we must watch most carefully the electric condition of the muscles. In cases in which muscular contractibility does not quickly reappear, the cure must be hastened by electropathic treatment. When we apply the forceps to the head in delivery, especially when the head is inclined to one side, we must use great care not to injure the nerve-fibers with the extremity of the blades; the foreceps must not be introduced too deeply. When the head alone remains to be delivered, and we use manual extraction, we should be careful, 1st, not to exert pressure upon the lateral portions of the vertebral column; 2d, not to rest the hand upon the clavicles while the fingers are bent in hook-shape; 3d, not to use violent maneuvers which may cause deflexion of the arm, and, 4th, not to make too great traction upon the arms. Want of care in the manipulations described, is the principle cause of radicular paralysis of the superior member.

Modern Cardiac Therapeutics.—Eichhorst (*Ctrlbl. fur die. ges. Ther.*, March, 1888), in a very practical paper, gives some valuable hints regarding the more modern remedies in affections of the heart. Digitalis, he says, still holds the first place among these. It is of great practical importance that the remedy be given in conjunction with or immediately after alcoholic stimulants and excitants. Especially is this the case when marked cyanosis exists. Digitalis in those cases has no effect until the vagus center is stimulated by the administration of alcohol.

When a quick effect is desired, the drug in the form of powder should be employed. In certain forms of kidney disease the powder may prevent threatened attacks of anemia. The powdered digitalis-leaves are very much increased in potency by the addition of calomel, not only in the dropsies of heart affections, but also in that occurring in emphysema, marasmus and in liver disease. The author thinks that the cumulative effect of the remedy is exaggerated. He has given it for months without noticing any such effect.

Next to digitalis, according to the author, stands strophanthus. Comparing the two, he says that digitalis is quicker and more certain in its action, but that strophanthus has the advantage in showing no tendency to cumulation, and does not seem to lose its effect by long-continued use. Eichhorst has found strophanthus more efficacious in some cases than digitalis, especially in a case of exophthalmic goiter and in one of long-standing ascites. Sulphate of sparteine stands low in the list after the two foregoing drugs. It seems particularly applicable in cases of cardiac asthma. Next come preparations of caffeine, which have the advantage over the last-named drug from their diuretic properties. *Adonis vernalis* and *Convallaria maialis* have but very slight effect on the heart, and are uncertain diuretics. In addition, they are likely to cause nausea and vomiting.

Regarding Oertel's method the author expresses himself as follows: In all forms of cardiac weakness it is advantageous to diminish the quantity of fluid ingested; the amount of fluid allowed should always be in proportion to the quantity of urine excreted. In reference to bodily exercise one should observe the greatest caution. Violent exercise may cause overdistension of the heart, and consequent sudden death. This is especially likely to happen in cases of fatty degeneration of the heart muscle. On the other hand, in cases of retarded action of the heart, from the accumulation of subpericardial fat, methodical exercise is advantageous in freeing the heart from its mechanical burden.—*N. Y. Medical Journal.*

Carbolic Acid in the Treatment of Typhoid Fever.—Among the many communications on this subject to the medical press by writers who are responsive to scientific promptings, we note a paper by Dr. Gramshaw, in the *Lancet*, which advocates the use of carbolic acid in the treat-

ment of typhoid fever, a method not entirely novel, yet one which merits close attention. Any new experiences offered in connection with the treatment of enteric fever are always acceptable, and, if further satisfactory evidence is adduced, the practice here suggested may have a hearty adoption. One hundred and sixteen cases have been under this treatment. The writer considers he has sufficient data to speak with some authority.

His plan is as follows:—

"The patient is, of course, confined to bed, in a well-ventilated room if possible, and every effort is made to 'nsure that no particle of solid food of any kind is administered by overanxious relatives. The diet is restricted to milk, toast and water, barley water and calf's-foot jelly; new milk is always insisted upon as the main support, from a quart to three pints being given to an adult in the twenty-four hours. The carbolic acid is ordered in a mixture, of which this is the prescription: Take of carbolic acid (Calvert's extra pure for internal administration), twelve minims; tincture of iodine (B.P.), sixteen minims; tincture of orange-peel, one drachm and a half; simple syrup, three drachms; water to eight ounces; the dose to be an ounce every four hours for the first fortnight, or until the urgent symptoms yield, when the same dose is administered three times a day. The good effect is manifested almost immediately. In two days the pulse slows and gains in strength, the temperature falls, the tongue becomes moist, all diarrhœa ceases, and the general condition of the patient is so much improved that, as a rule, in a week all anxiety is at an end, and the case progresses quietly toward recovery. It sometimes happens that a case is cut short by this treatment as suddenly as is a case of acute rheumatism by the exhibition of salicylate of soda; but more generally the fever runs its course of thirty days before all danger of relapse is past, and I have found it better to continue the medicine until the thermometer shows no rise of temperature for three or four clear days. If the pulse at any time rises above 120, the temperature 105°, or if sordes form on the lips or teeth, either champagne or brandy, and sometimes both, are given every two hours. This, however, is rarely necessary. Complete abstinence from any kind of solid food until all traces of fever have disappeared is insisted upon, and when the patient does return to his ordinary diet, the resumption of solids is a gradual progress from soup to boiled sole, chicken, mutton and soft vegetables."

TREATMENT OF ANEURISMS BY IODIDES AND ANTIPYRIN.—At the Académie de Médecine M. Sée produced a paper on the treatment of aneurism by iodides and antipyrin. Seventeen cases were brought forward to confirm the efficacy of the treatment and in all a marked decrease in the size of the tumour was observed, and the oppression, sense of suffocation, laryngeal dyspnœa, accompanied by aphonia, derived from pressure on the recurrent nerve, entirely disappeared. All these happy results M. Sée did not hesitate to attribute to the iodide or potassium. The iodide of sodium, contrary to the opinion of Dr. Huchard, was not as good as the iodide or potassium. As to antipyrin, the learned professor found that it rendered the impulse of the heart more calm, and thus permitted the blood to complete its coagulation in the sac, and further, the painful sensation of tightness so often experienced by patients afflicted with this affection was known to be completely relieved by its use. —*The Medical Press.*

Book Notices

A TEXT-BOOK OF HUMAN PHYSIOLOGY. By Austin Flint, M.D., LL.D., Professor of Physiology and Physiological Anatomy in the Bellevue Hospital Medical College; Visiting Physician to Bellevue Hospital; Member of the American Philosophical Society, etc. With 316 Figures in the Text, and 2 Plates. Fourth Edition, Entirely Re-written. Large 8vo. Pp. 872. Cloth. New York: D. Appleton & Co. Cincinnati: R. Clarke & Co. Price, $6,00.

As stated upon the title page, this very fine work upon physiology has been entirely re-written. While the general arrangement of subjects is retained, but little remains of the original text. The author says that although the third edition, published in 1880, is still much used as a text-book, he himself has not been able to follow it closely in public teaching in consequence of its many defects—defects, we presume he means, arising from the great advance that has been made in physiology since that time.

Prof. Flint has long been a teacher of physiology, and the experience thus gained has eminently qualified him to prepare a work adapted for the use of students and of physicians for reference. There have been published in this coun-

try many excellent works upon physiology, written by distinguished foreigners, but while they hold a high position as learned expositions of the subject upon which they treat, yet they do not meet the wants of American students like the work of Prof. Flint; for the American system of medical education differs from that of the European.

Prof. Flint very correctly says that an author's peculiar views and theories should find no place in a text-book. A text-book is not studied in order to ascertain the theories or views of the writer, but to learn the generally recognized and accepted parts of the branch of medicine which it upholds. In looking through the book before us, therefore, we fail to find many pages devoted to arguments to prove this or that theory. Conclusions are not established facts. They may be true, but they may have been deduced from too few facts, and, consequently, be incorrect. As physiology is a branch of knowledge to which new facts are being constantly added, the various theories which have been held by writers from time to time are liable to be overthrown at any time by the discovery of new truths. A student can not afford to spend time in learning that which may have to be unlearned.

The first subject treated by the author is the blood. It is the vital fluid from which the vital organs obtain their pabulum, and, consequently, is very properly first taken up in a work on physiology. There is a plate which beautifully exhibits the blood-corpuscle greatly magnified. The first figure of the plate shows human blood-corpuscles magnified 840 diameters by a $\frac{1}{18}$ inch homogeneous oil-immersion-objective by Zeiss. The second figure represents the corpuscles of a Guinea-pig, spread and dried on a glass cover, magnified 1450 diameters, $\frac{1}{18}$ inch homogeneous oil-immersion objective by Zeiss and Tolles' amplifier. Following the treatment of the blood, the author gives a very interesting sketch of the discovery of the circulation of the blood by Hervey in 1616, an account of which he published in 1628 in the "*Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus.*"

But it is not necessary to give in order the subjects treated by Prof. Flint in his work. It is only necessary to state that all are fully but concisely considered. It might be supposed that, in consequence of the size of the work, there was much elaboration, but such is not the fact. An examination will show that greater brevity could not have

been employed without omissions of importance, which would have detracted from the value of the work. In fact, in this edition, matter of previous editions has been curtailed, as historical references. The author has also avoided the discussions of unsettled and disputed questions.

We can very heartily recommend the work of Prof. Flint. As we have stated, it is well adapted for the use of students; especially such as are in attendance upon medical lectures. The author having been for a long time a teacher of physiology, and fully understanding the wants of students, the arrangement of the subjects and the method of treating them will be found to be such as will enable a student to easily follow the instructions of a lecture.

The publishers have issued the work in a most creditable manner. The type is beautiful and the paper the very best.

A System of Gynecology. By American Authors. Edited by Matthew D. Mann, A.M., M.D, Professor of Obstetrics and Gynecology in the Medical Department of the University of Buffalo, N. Y. Volume II. Illustrated with Four Colored Plates and Three Hundred and Sixty-one Engravings on Wood. 8vo. Pp. 1180. Leather. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co.

We noticed the first volume of this work in the July number of the Medical News. The second volume is now issued, and it is one of large size, containing nearly twelve-hundred pages.

The contributors to the second volume are eighteen in number, among them we notice the names of Dr. Robt. Battey, of Georgia; Dr. Wm. Goodell, of Philadelphia; Dr. Wm. H. Baker, of Harvard University; Dr. Wm. T. Lusk, of Bellevue Hospital Medical College; Dr. T. Gaillard Thomas, of the College of Physicians and Surgeons; Dr. Edward W. Jenks, of Detroit, etc.

On noticing the first volume we said that, "These 'composite, systematic treatises' on medicine seem to be very popular," and, in fact, it is not strange they should be; for it is reasonable to suppose that the various subjects which make up the departments of medicine to which the work is devoted, have been distributed among the different writers with reference to the qualifications of each one to treat such as may be assigned to him. In the second volume diseases

of the vagina are assigned to Dr. Chas. Carroll Lee; tumors of the breast to Dr. S. W. Gross; diseases of the bladder and urethra to Dr. W. H. Baker; treatment of ovarian and of extra-ovarian tumors to Dr. Wm. Goodell, etc.

There is no more complete work on gynecology than this System of Gynecology, by American Authors. All the diseases to which women are liable are fully treated in it by gentlemen who have had so long experiences and extensive practices in them exclusively that they have obtained world-wide reputations. Under the circumstances that the work has been prepared it can not be otherwise than that the various affections considered in it are so treated that the reader is made acquainted with the accepted views of the profession in regard to them—that the pages before him exhibit the learning of the profession as regards the diseases to which they are devoted. It is reasonable to suppose that the contributors are familiar with the whole range of literature, old and new, of a class of affections the study of which they have made a specialty for many years.

We have, however, in our previous notice of the work so fully set forth its merits that it is not necessary at this time to mention them further. The high standing of the authors is a guarantee of the value of the work without any commendation.

We will mention that the "*Systems of Gynecology and Obstetrics, by American Authors,*" will compose a work of four octavo volumes of about nine hundred pages each—two volumes upon Gynecology and two volumes upon Obstetrics, the former edited by Matthew D. Mann, M.D., and the latter edited by Barton Cooke Hirst, M.D. The volumes upon Gynecology are now ready. The prices per volume for the four volumes are, cloth, $5.00; leather, $6.00; half Russia, $7.00.

TREATISE ON THE DISEASES OF WOMEN. For the Use of Students and Practitioners. By Alexander J. C. Skene, M.D., Professor of Gynecology in the Long Island College Hospital; Gynecologist to the Long Island College Hospital; President of the American Gynecological Society, 1887, etc. With 251 Engravings and 9 Chromo-Lithographs. Cloth. 8vo. Pp. 966. New York: D. Appleton & Co. Cincinnati: Appleton's Agency.

"This book," says the author, "was written for the purpose of bringing together the fully-matured and essential facts in the science and art of gynecology, so arranged as to meet the requirements of the student of medicine, and be convenient to the practitioner for reference. In the plan adopted, the diseases peculiar to women are, as far as possible divided into three classes. The first class comprises those which occur between birth and puberty; the second, those between puberty and the menopause; and the third, those which come after the menopause."

The work has this peculiarity, which will especially recommend it to young practitioners as well as to advanced students of medicine, that, besides each subject being briefly described, the histories of cases, typical and complicated, are given as illustrative of the disease or injury under consideration, together with the author's method of treatment. The number of illustrative cases given depends upon the practical importance of the subject and the ability to make it more plain by the use of illustrations. Young practitioners especially are interested in the reports of cases which are given to make instruction plainer and to exhibit the reasons of any plan of treatment. It is a well-known fact that a lecture upon a disease with a patient present having, the disease, in whose case the symptoms can be shown, is of far greater value in imparting instruction than a didactic lecture upon the same disease in which the symptoms can not be thus witnessed and studied.

In the chapter upon the abuse of pessaries the author reports the case of a lady who called upon him from the West. She was 40 and single. Her health and strength had been good until she was 36 years of age, when she began to have a variety of nervous symptoms clearly due to general debility. She was treated by several reputable physicians, but not recovering as fast as she desired, she consulted still another, who told her that she had falling of the womb, which caused all her troubles. There was not a symptom that pointed to any disease or displacement of the sexual organs, but a Cutter pessary was introduced, and the patient wore it about two years. Her general health improved very little, and the pessary soon caused her trouble; still she persisted in wearing it because the doctor said she must do so; her condition became so wretched that she came East, in the hope of gaining relief.

"When she came to me she had some vaginitis and vulvitis caused by the pessary, but the uterus was perfectly normal in every way. The Cutter pessary had pushed up the posterior vaginal wall far beyond the cervix, which lay on one side of the instrument, not between the bars as it should have done.

"The conditions of the posterior vaginal wall at the upper part was thin. The lower part of the vagina was normal, excepting the inflammation caused by the pessary. The vulva was also inflamed, and she suffered greatly from this, especially in taking exercise. This patient also felt the want of the pessary when it was removed, but only for a short time. She was examined seven months after the removal of the instrument and was found to be perfectly well."

It will thus be seen by the example that we have given, which is an interesting and valuable report, apart from the consideration of the work, that it is a clinical as well as a didactic treatise upon the diseases of women. The author, while he does not consume space in lengthly discussions upon disputed points, gives his own views and methods of treatment; which still more makes the work a practical one.

Clinical Lectures on Certain Diseases of the Nervous System. By Prof. J. M. Charcot, Professor to Faculty of Medicine, Paris; Physician to Saltpetres, etc. Translated by E. P. Hurd, M.D., Member of the Massachusetts Medical Society. 16mo. Pp. 155. Paper. Detroit: George S. Davis. Price, 25 cents.

This work belongs to the series of volumes which Mr. George S. Davis, of Detroit, has been publishing for several years, entitled The Physicians' Leisure Library. As will be observed, the author of it is the distinguished French medical savant, Prof Charcot, than whom there is no more eminent physician in the world. Prof. C., more than any other investigator, has elucidated the functions of the nervous system.

The volume is largely devoted to hysteria, which is a nervous affection of great interest, simulating as it does all other diseases and exhibiting most peculiar phenomena. Prof. Charcot shows in this volume, contrary to the views of very many, that it affects the male as well as the female. He says that he has been struck with the fact that male hysteria is found with the same characters in men belonging to all races, all nationalities.

HAND-BOOK OF HISTORICAL AND GEOGRAPHICAL PHTHISIOLOGY. With Special Reference to the Distribution of Consumption in the United States. Compiled and arranged by George A. Evans, M.D., Member of the Medical Society of the County of Kings, New York, Member of the American Medical Association. 12 mo. Pp. 295, cloth. New York: D. Appleton & Co.; Cincinnati: R. Clarke & Co. Price $2.00.

We will quote the author's statement of the object in preparing this volume: "In the following volume I have attempted to present a sketch of the development of pulmonary consumption from the time of Hippocrates up to the present day, together with the ascertained facts regarding the geographical distribution of this affection. It has also been my effort so to arrange the statistics in regard to the geographical distribution of consumption in the United States, as to make them available for convenient reference in selecting localities of resort or residence for invalids, and also for those who are in health."

The author coincides with Prof. Hirsch in considering that pulmonary consumption has always existed. Prof. Hirsch says: "It is emphatically a disease of all times, all countries and all races. No climate, no latitude, no occupation, no combination of favoring circumstances, forms an infallible safeguard against the onset of tuberculosis, however such circumstances may mitigate its ravages or retard its progress. Like typhoid fever, phthisis dogs the steps of man wherever he may be found, and claims its victims among every age, class and race."

Hippocrates (460–377 B.C.) was the first writer to give a description of consumption with any degree of clearness. He considered that it consists of a suppuration of the lungs due to various causes, and may be acute or chronic. It may occur, as he stated, as a result of inflammation, or it may proceed from a chronic pneumonia, which is complicated by a defluxion of mucus from the brain into the lungs.

We learn from the work that consumption prevails to only a very limited extent in some of the islands near Europe. It rarely occurs in Ireland. In the Faroe Islands it is seldom met with. In the Hebrides it is almost unknown. In the Shetland Islands it has not been common until recent years. Among the Kirghiz of the Steppes it

is quite unknown. It is also rarely met with on the Black Sea Coast.

Every physician, though it be regarded incurable, is greatly interested in all information pertaining to the dreaded and most terrible scourge of all diseases, consumption. Its destroys its thousands of victims every year. Its invasion means death. The victim knows that when it attacks him his doom is sealed—sentence of death has been passed upon him, and, though the fatal day may be delayed, it will come. What medical man, seeing hundreds thus carried away by such a terrible malady, can help feeling an intense interest in all pertaining to it. A work, consequently, in which is collected all the known facts in regard to the disease—its history, geographical distribution of it in countries other than the United States, in the United States, topography and climate of States and Territories, etc., meteorology, etiology, etc.—must certainly excite such interest as to cause every physician to desire to have a copy of it in his library. There is probably no disease in regard to which a physician is so much questioned as in regard to consumption. He is expected to know—(and why not?)—when it first originated, its causes, how it is affected by climate, soil, weather, age, sex, in what parts of the world it is best to live in order to escape it. This work presents a treasury of knowledge of all facts pertaining to this dread affection.

SECOND ANNUAL REPORT OF THE STATE BOARD OF HEALTH AND VITAL STATISTICS OF THE COMMONWEALTH OF PENNSYLVANIA. Transmitted to the Governor, December 1, 1886. 8vo. Pp. 1056. Cloth. Benjamin Lee, M.D., Secretary. 1887.

This very large work is highly creditable to the Secretary, Dr. Benjamin Lee, under whose supervision it was published. The work contains the proceedings of the meetings of the Board, a large amount of valuable statistical matter, and many reports filled with most interesting and useful information relating to hygiene, causes and prevention of disease, epidemics, endemics, customs and habits of people, building public houses, and residences, etc. There are many subjects treated in the volume that, if the discussions of them were printed in tract form and gratuitiously distrib-

uted among the people, great benefit would undoubtedly result.

Among other interesting papers published in the work is one entitled "Narcotics, and the Appetites which they Produce." Some of the views expressed in it we do not assent to, but there is much stated that is undoubtedly true. The writer does not believe the generally-accepted opinion that alcoholic intemperance is hereditary. He says that if it were true, there should be as many intemperate daughters in a family as sons; but this, he says, is not the fact. Again, the children of drinkers would seldom, if ever, remain sober. It sometimes happen that all the children remain sober where the father was a drinker. Again, the children of sober parents and grand-parents would always remain sober, but this is not the fact. He has even known instances in which the mother used alcoholic drinks during the period of gestation, and yet the child born exhibited no signs of having inherited from the mother an appetite for strong drinks. On the contrary, children brought into the world under such inauspicious circumstances have become industrious, respectable men and women.

He concludes that the theory of a transmitted instinct for strong drinks exists in theory only—in the imagination of those who are in search of an excuse which shifts the responsibility of wrong-doing upon others.

The appetite for drink, the writer says, is not an "*original instinct.*" If it was, every human being in the world would possess it. The responsibility for it then would rest upon the Creator. If it is a transmitted instinct, the responsibility would be thrown on one's ancestors. He considers both theories mere delusions—inventions to escape from blame that belongs to the drunkard. When Adam was accused he said: "The woman whom thou gavest to be with me, she gave me of the tree, and I did eat;" and Eve, being likewise accused, said: "The serpent beguiled me, and I did eat." Adam blamed his wife and his wife blamed the devil. The drunkard soliloquizes thus: "It is true I am a drunkard, I have spent my fortune, I have ruined myself and disgraced my family. My father drank whisky and beer, and also my grandfather. I have inherited the appetite and I can not help it. My wife and friends may say what they please, I am not to blame."

While we are disposed to disagree with the author in the declaration that the appetite for strong drink is not trans-

mitted from parent to offspring, yet we know that it is true that the excessive drinker often puts forth the excuse for his vice that he can not help it—that it is not fair to hold him responsible. We have often heard a lawyer, of more than ordinary ability, exclaim: "I am not to blame for being a drunkard, my father was a drunkard—I inherited the appetite from him—blame him." Though his attention would be drawn to the fact that he had a brother and several sisters who were sober and had never manifested any signs of an appetite for liquor, yet he continued to plead that he was not responsible for his drunkenness.

THE PHYSICIAN'S VISITING-LIST (Lindsay & Blakiston) FOR 1889. Thirty-eighth Year of its Publication. Philadelphia: P. Blakiston, Son & Co.

THE PHYSICIANS POCKET DAY BOOK. Designed by C. Henri Leonard, M.A., M.D. Good for Thirteen Months. Accommodates Daily Charges for Twenty-five or Fifty Families Weekly. Has Complete Obstetrical Record for Ninety-four cases, and Monthly Memoranda, for Dr. and Cr. Cash Accounts. Detroit: C. Henri Leonard.

THE MEDICAL NEWS VISITING-LIST—1889. Thirty Patients Per Week. Philadelphia: Lea Brothers & Co.

We give above the title pages of three visiting-lists, published by three different publishing houses. The first one of the lists is the old and well known visiting-list of Lindsay & Blakiston.

Visiting-lists, as published each year by various publishers, have more or less similar features—the objects being nearly the same. The preface of the Medical News Visiting-List explains so well what purposes are to be subserved by a visiting-list that we will quote a few lines. "A visiting list should not be expected to contain a treatise on the practice of medicine. It should, however, furnish brief memoranda which may be useful in an emergency, or in moments, which come to the best of men, when one can not recall a fact with which he may be perfectly familiar. It should be also so arranged as to permit a physician to keep a clear record of his engagements and of his professional work, from which he may transfer to a ledger a permanent record which will have a legal status in case of a dispute."

While a few brief memoranda in a visiting-list may often be found to be very useful—sufficiently so probably to justify their insertion in the copies of each year—yet we think they should be made as few as possible. A family practitioner is usually compelled to carry a great many articles about himself, as, a fever thermometer, hypodermic syringe, gum lancet, bistoury, prescription paper, etc. His visiting-list, therefore, should be as light and as little bulky as possible.

The three visiting-lists we have on our table are excellent works. All of them have spaces for recording daily visits to a large number of patients throughout the year. The lists of Lindsay & Blakiston and the Medical News are for the year 1889; Leonards, in consequence of leaving blank the names of the month, can be commenced with at any time of a year, and run for thirteen months. They all have pages for general memoranda, keeping cash accounts, records of births and deaths, amounts of bills made out and presented, addresses of nurses and general addresses, etc. Every practicing physician should have a visiting-list. They save a hundred times their cost. Those doctors who during their lives had large practices, and yet left their families destitute on dying, never used a visiting-list—not one of them.

HAND BOOK OF PHARMACY AND THERAPEUTICS (LILLY), 248 pages, Third edition, thoroughly revised. Eli Lilly & Co., Indianapolis, July 1888.

The aim of this book is, as stated in the introduction, "to furnish the busy practitioner a reliable means of ready reference, at once concise, systematic and authoritative, to which he may refer with confidence in cases of doubt. Younger members of the profession and medical students will find this little work full of suggestions." It will be sent free to any physician, druggist or medical student by addressing Eli Lilly & Co., Indianapolis, Ind., mentioning this jonrnal.

Editorial.

STUDY OF BACTERIOLOGY.—We learn from the *Brooklyn Medical Journal* that the trustees of the Maryland Laboratory have announced the completion of the laboratory and its equipment for practical work. Special facilities are

offered to those who desire to prosecute original research. For this purpose private laboratories have been provided, and arrangements are now being made for the purchase of a library which shall contain all the literature necessary for reference in the departments of bacteriology, physiology, and pathology.

Dr. George M. Sternberg, of the U. S. Army, the distinguished bacteriologist, will give instruction by lectures in bacteriology, so soon as he returns from the South where he was sent under orders of the President of the United States to investigate the cause of yellow fever.

Geo. T. Kemp, Ph.D., of the John Hopkins University, has been obtained as an associate of Dr. Sternberg in Bacteriology and Physiology. With his assistance and under the direction of Dr. Sternberg, practical instruction in Bacteriology will be given during the winter and spring. Dr. Kemp will be at the laboratory daily from 9 A. M. until 5 P. M.

Apparatus of the best kind has been provided, and is a duplicate of that which is now in Koch's laboratory. It has recently arrived from Berlin. The microscopes are said to be of the Leitz pattern and are provided with the Abbe condenser and one-twelfth inch oil-immersion lenses. A full set of cultures has been obtained, some from Koch's laboratory and the others from the pathological laboratory of John Hopkins University.

The fee for instruction has been placed at $15.00.

Cincinnati has a great many very wealthy citizens. Not a few have more wealth than is necessary to provide for their families, relatives, and friends. Some of them, it is not improbable, are casting about in their minds what they had best do with some of their surplus riches, so as to benefit their fellow-men, and, at the same time, have their names mentioned as benefactors. We feel sure that from some one of these a hundred thousand dollars or more could be obtained to begin the nucleus of an institution devoted to original research in the natural sciences and especially to investigations as regards the causes of disease. There never has been so great interest manifested in the study of the causes of diseases as at the present time. It seems as if it is about to be demonstrated positively that phthisis pulmonalis, yellow fever, and other affections have their origin in certain germs which become developed in the system. But to carry on original researches requires money for the pur-

chase of apparatus, material, etc. Besides, scientists who devote their time to the labor of investigations and giving instructions to others must have a support secured for them. The laborer is worthy of his hire—therefore those who give their whole time to obtain knowledge from the secrets of nature—to delve into the unknown—for the benefit of their fellow-men, should be enabled to live by this labor, and not be compelled to follow some other pursuit to obtain the necessaries of life.

It would add greatly to the reputation of Cincinnati to have such an institution in its midst. The John Hopkins University will give more lustre to Baltimore than its commerce. Cincinnati takes great pride, and properly so, in its great Music Hall, but a scientific institution of the character we have described would yield it far more glory. The McMicken University is a failure, but a John Hopkins University would not be.

Is there not some one who will agitate the subject of establishing an institution for original investigation in the Queen City of the West? If it was done we have no doubt but that it would be realized. There are men of wealth who would give their means for the purpose, but it has never been brought to their attention. There is no city in this great country so favorably situated for such an institution as is Cincinnati.

When Adam and Eve were turned out of Paradise a flaming sword was placed at the east end of Paradise which turned every way, to keep the way of the tree of life, lest our first parents should put forth their hands, and take also of the tree of life and eat and live forever. May it not be that, the flaming sword having been removed, the tree of life may yet be discovered, or some of its fruit, and from it, human life be prolonged forever? We may be nearer the discovery of the tree of life than is supposed.

PHYSICIANS AS FINANCIERS.—Physicians are generally admitted to be exceedingly poor financiers. There is probably no class of men who realize so little financially from their labors. Persons are often astonished in how straitened circumstances many physicians, who were known during life to have had large practices, on dying, leave their families. They lived moderately—indulged in no luxuries—yet, after all debts have been paid, there will be left to the families of each one probably only a very unostentatious dwelling.

house, and, in some instances, we have known a mortgage to be upon it.

This is not a charitable world, and woe to a helpless family whose bread-winner has been taken away, and has left no means behind with which to purchase the necessaries of life. If there are daughters who have the qualifications, they must begin to give music lessons to the daughters of their father's patrons, or teach school, or solicit sewing. If there are sons at college, they must relinquish their purpose of obtaining an education and seek employment as clerks. This is not a fancy picture by any means. About four years ago a physician, whom we knew well, died. He had practiced medicine nearly forty years, having all that time a large practice. On his decease, there were mortgages on his house for nearly its whole value; he had no bank account, and his chattel property was almost valueless—worth only a very few hundred dollars—but of whatever value it was, there was not money enough realized from it to pay his debts. An only daughter, who, before, never knew want, was compelled to trudge the country to sell books, until, weary and sick, she laid down and died.

It will be supposed by some that he lived luxuriously, or was the victim of vices. On the contrary, he lived most economically and had not a vice. No man possessed a purer character, or was more upright in all his dealings. His great fault consisted in not conducting his business in a business manner. His books were kept so carelessly that he was easily defrauded by any one inclined to do so.

We have often heard it said of a distinguished surgeon of Cincinnati, now deceased, that he kept no book account of his services, but trusted to his memory. A gentleman told us that after he had been treating him and his family for more than three years without ever presenting a bill for his services, he finally went to him and requested his bill, as he wished to pay it; but two or three months elapsed before he finally got it, and not even then until after repeated applications. He expected a bill of not less than three hundred dollars, and would not have been surprised if it had been greater; but to his great astonishment, when the bill came, it was for only fifty dollars. He assured the doctor he had certainly made a mistake, and compelled him to accept twenty-five dollars additional. It is not surprising that physicians are poor financiers—poor bookkeepers. It is generally agreed that a person can excel in

only one department. A scientific man has not the style of mind possessed by a business man; and if, therefore, he should be induced to abandon his scientific pursuits and enter upon some business he would undoubtedly fail at it.

But, besides, a physician's whole mind and feelings, if he has considerable practice, become engrossed in his profession. He is constantly in the presence of disease and death. At one time he feels that his countenance is eagerly watched, and his words closely observed, that his mind may, if possible, be fathomed to know if there be hope for the recovery of the dear one; at another time he is in the house of mourning, hearing the wail of the mother as she gazes upon her dying child; or the despairing cry of the wife, soon to become a widow, as she sees the death film spreading over the eyes of her husband.

Considering the circumstances which constantly surround physicians, it is not surprising that, generally, they are poor financiers, and that the books in which they note down their business are usually in great disorder, and poorly represent their business.

For the last twenty-five or thirty years efforts have been made to simplify the business books of physicians, so that as little time as possible would be required for a medical man to enter his charges, and keep something like a systematic account of his business. It has been found impossible for one engaged in the active practice of medicine to keep what is called a day book, cash book, and ledger, for, with such a set of books, oftentimes not having time to enter any charges for two or three days, he will frequently forget many items. Then, again, frequently he will let his ledger go unposted for weeks and months, and when called upon to make out a bill he will, in consequence, not be able, and will be under the necessity to ask the applicant to call again.

Visiting Lists have been constructed to enable physicians more easily to keep account of their services; and they have certainly been of great use. We feel sure that, through them, we have saved many dollars, which, without them, we would have lost. We have many times, in noticing copies of them, recommended them to our readers. But a Visiting List is good for only a year. At the beginning of each year it is expected that you will get a new one. Consequently, if an account for services runs back two or

three years, a physician is compelled to hunt up the old volumes before he can make out the bill, unless he has copied his charges into a ledger, which, of course, it is expected he will do.

The very best book that we know of for a physician in which he can keep and account of his services to all of his patrons, is Bernd's Physician's Register. For a physician to keep one of these requires no skill, no knowledge of book-keeping. A ten-years-old child can master it; and yet a more methodical, a better adapted method of keeping a physician's accounts could not be devised. If a doctor can not, with one of these, register all his business, so that he can know at any time who owes him and who does not, there will be no hope of being able to devise any thing for him so that he can keep an account of his business. It is truly stated in the advertisement of these works: "They afford a complete, comprehensive and most practical system of keeping physician's accounts. They require no posting, no transferring, no indexing. One writing of a patient's name answers for an entire year. No auxiliary books are required." A patient's account can be told at any time at a glance. It will never be necessary to tell a patron, when he calls for his bill, to call again, for that his account has not yet been posted, for it is always posted—the method necessarily makes it posted.

If any of the physicians who have died, leaving their families in destitute circumstances, although they had large practices during their lives, had had copies of Bernd's Register in which they could have registered their services and made proper charges for them, we verily believe the results would have been different.

We consider the members of the medical profession are under great obligations to Messrs. Henry Bernd & Co., for their Registers. We hope they will have a large sale—not for the sake of the Bernd's merely, but for the sake of the families of physicians.

Important Information.—James C. Bayles, editor of *The Iron Age and Metal Worker*, in his work on house drainage and water service, says: "I have never seen a house drain built of stone, brick or wood, and rarely one built of earthen pipes with cement joints, which I should be willing to live over. Stone drains having rough inside surfaces can not be effectually flushed, and become coated

throughout with foul deposits, offensive and dangerous in their rapid decomposition. Brick drains, as usually built, have this objection, together with the liability, of all but exceptionally good bricks, to disintegrate when buried and kept constantly wet. Even when highly vitrified and laid with hydraulic cement, their rough surfaces and perviousness of their joints to water are objections which should exclude them from use for this purpose. *Earthen pipes, even when well glazed, can not be depended upon when laid in cellars, for the reason that the best cement joints are pervious to water, which carries with it organic matter to lodge and decompose in the pores of the pipe and its joints*;" also that "iron is so much better than any substitute yet found for it, that it should, I think, always be exclusively used in the drainage of city houses."

Waring, Helyer and Davis, recognized authorities on house drainage and plumbing, state unequivocally that all sewerage should be carried outside the building in iron pipes.

The *Sanitary Engineer*, published in New York and London, in a recent issue, said: "A brick sewer in a building is out of place. It is a relic of an ignorant age [A relic of barbarism, as the Hon. Charles Sumner would have said. — Ed.] in matters of house drainage and sewerage.

The Pennsylvania State Board of Health, in its report for 1886, just published, says: "Another objection which our Board has to the system of plumbing and house draining employed, is that in the cellar iron waste pipes from urinals and washstands enter earthenware pipes, the joints of which are made with cement. The change of temperature, or the alternate passage of hot and cold water through the pipes, will produce sufficient contraction and expansion of the iron to break the seal and render the joints defective."

Wm. Paul Gerhard, chief engineer of Philadelphia, in a work on house drainage and plumbing, says: We can, with perfect safety, run the drains across the basement floor of a dwelling, provided we can use the only safe material, that is *heavy iron pipe*.

The system of house drainage and plumbing adopted by the Government engineers is probably the latest and most improved, and they do not use brick sewers or earthen drain pipes in buildings. In the post-office of Philadelphia they abandoned the brick sewer formerly in use and substituted iron pipe.

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Original Contributions.

Medical Electricity.

BY R. R. HOPKINS, M.D., RICHMOND, INDIANA.

MEDICAL Electricity, Electropathy, Electrical Therapeutics, all mean the same thing. But before proceeding to define precisely what the meaning of electricity is, it may be of interest to our readers to give something of the history of this subtle and all-pervading agent, which is playing so important a part in this age of astounding achievements in unfolding the ethereal and dynamic elements of nature. Man, always seeking to make the objects of nature around him contribute to his comfort and happiness, at a very early period undertook to utilize electricity. Hence, we find that a century before the Christian era, and previous to any record of scientific discoveries, crude experiments were made with this agent; the history of electrical therapeutics being the history of electricity itself, and every step in the field of the latter, has been speedily followed up, on the part of the medical profession, in order to turn this great agent to practical account. The history of electro-therapeutics may be divided into three periods, the first dating back two thousand years, as we have said, beginning with experiments made in connection with the Raja-torpedo, and ending with the therapeutical use of the electrical machine and Leyden jar. The second is comprised between 1789, the year of the discovery of contact electricity by Galvani, and 1831, the year in which induction electricity was discovered by Professer Faraday. The third period extends from 1831, to the present time.

Of the first period only a few of the isolated facts are known. The ancients ate of the flesh of the Raja-torpedo on account of its supposed curative properties, and a thousand years ago, the native women of West Africa put their sick children into a hole filled with water in which were some of these fish, and Scribonius Largus, a physician, who lived in the time of the Emperor Tiberius, did something similar for the cure of gout. Pliny, the Roman naturalist, mentions electricity as a remedy. It was not until the middle of the eighteenth century, after the discovery of the electrical machine and of the Leyden jar, that modern practitioners began to experiment in earnest with this remedy. From 1730 to 1831, medical men and scientists, of both Europe and America, experimented with static electricity and galvanism, during which time many forms of disease had been made to yield to its powerful influence. But its greatest and almost magical effects, together with the variety of its applications, and the avoidance of everything disagreeable to the patient in the shape of shocks, awaited the grand discovery of the electro-magnetic apparatus, by Professer Faraday, and now all of the forms of static, galvanic, and electro-magnetic electricity are successfully used in the treatment of many diseases, sometimes separately and sometimes in combination. The favorable results which have followed repeated applications, have given great impetus to further experiment and investigation, and improved appliances of every kind have multiplied, until nearly every department of medicine and surgery has its peculiar apparatus.

Before long, electrical therapeutics will have become an indispensable part of a thorough medical education; indeed it is already taught in some of our colleges of medicine, being fostered by many of the most scientific and advanced minds of this age. But before proceeding further we will notice another point. Impartial history shows that, before our recent electro-therapeutists had commenced their professional studies in regard to this agent, there were not a few empirics who, by some form of general or localized electrization, or both combined, or by methods various and inconsistent, and in spite of their ignorance, were achieving success in the treatment of disease by electrization, which in some respects even the most advanced physicians of our day have not yet surpassed. But we must not forget the fact that some of our greatest

discoveries, as well as inventions, were discovered by accident and were often kept secret a long time before our scientists were able to discover them, to develop their usefulness, as well as to make the necessary improvements. In 1852, Beckensteiner suggested the idea of "animalizing" static electricity by passing it through the body of the operator, and making passes over or near the patient. In 1857, M. Dropsy de Cracow published a new method of faridization, the modus operandi of which consisted in connecting an electrode by two branches on the top of the head and the epigastrium, while the other electrode was connected by four branches with the hands and feet. At each sitting the poles were reversed. In 1863, Gubler suggested the treatment of conditions of debility by placing both hands and feet in separate basins containing salt water, and passing a Faradic current through the body.

The progress of electro-therapeutics during the last era has been greatly stimulated by the physiological investigations of Nobili, Marianini, Matteucci, Du Bois-Raymond and many others. We are told by investigators on this subject that electrization was something more than a mere stimulant—that it was a tonic of very remarkable efficacy, and as such was indicated in a wide range of diseases associated with debility and impaired nutrition. Electro-therapeutics has been in advance of Electro-physiology. This inference follows as it did in electro-therapeutics. Starting with some electro physiological assumption, or, more frequently, without any theories whatever, men have blindly and empirically resorted to electricity as a panacea for an immense variety of diseases, and amid many blunders and absurdities, stumbled on many important results. The truth is, that among the advanced minds of our day the conviction is ever deepening and strengthening that electro-therapeutics is not yet, and may never be, an exact science. So profound is our ignorance of the chemical constitution of the body; of the molecular and other changes that incessantly take place in health and disease; of the modifications which these changes undergo in the infinite and varying influences of climate, temperament, diet and mode of life; and so limited and uncertain is our knowledge of the nature and action of medicines, that we well resign the hope of reducing therapeutics to an exact science to distant generations. As Niemeyer says, "It is idle to hope for a time when a medical prescription should be a simple

resultant of a computation of known quantities, that, while we are waiting and toiling to perfect our knowledge of pathology, and determine its relation to therapeutics, we must not allow our patients to suffer, but should faithfully use those remedies and methods of treatment that experience has recommended."

Very many of our so-called discoveries in this, as in so many other branches of science, are but revivifications of ancient theories and practices, refined, modified and developed by modern research. Again, electro-physiology has demonstrated that the auditory nerve could react to the galvanic current, yet galvanism, almost from its first discovery, has been used for diseases of the auditory nerve; and in occasional instances with success. Not until the time of Remak was it demonstrated that the sympathetic could be directly affected by external electrization, and yet the sympathetic had been directly affected, for good or ill, by all who had previously made applications of electricity over the head, neck, or spine. Very recently, indeedt has it been demonstrated by physiological experiments that electrization has a marked influence over nutrition, bu, improvement in nutrition was one of the earliest, as it has been one of the most constant, effects that have been obtained from electrical appliances. Not to go back to the mythological procedures of the Roman physicians, it has passed beyond the empirics and is now in the hands of the scientific investigator, as by the birth of electro-puncture it is making advances in electro-surgery, and is beginning to realize something of the hopes of its early supporters. We do not think it best to consume space to enter upon a minute history of the different steps of the progress of the history of electro-therapeutics. For this we will refer to that practical treatise on electricity by Geo. M. Beard, M.D., and A. D. Rockwell, M.D.

As this subtle agent is now recognized as one of our great remedies in the cure of diseases, we must say from experience it is of great service in certain forms of paralysis, as a tonic in anæmia, dyspepsia and general debility. But in congestions of any of the nervous centers it will do harm. The research of Meyer and Remak, in Germany, and of Duchenne and Becquerel, in France, have done much toward the development of the remedial uses of this mysterious agent; and the success that has attended their experiments in the treatment of all nervous disorders is

worthy of far more attention than it has hitherto received, for while it is true, as is commonly supposed, that galvanization and faradization are specially indicated in protracted cases of paralysis, it is also true that they are still more valuable in general nervous debility, whether it manifests itself in the shape of dyspepsia, chorea, neuralgia, anæmia, or amenorrhea. For a number of chronic asthenic affections, faradization is a far safer as well as a more effectual remedy than any internal tonic, if it be applied thoroughly, with the negative pole at the feet and the positive pole along the spine and over the stomach and bowels. Its immediate effects are in some cases exceedingly exhilarating, and if regularly and faithfully repeated it will permanently benefit the whole digestive apparatus. For information in regard to the instruments for the applications that are at present considered the best, we refer to the Annual of the Universal Medical Sciences, vol. v. page 49. The history of electrical therapeutics with its varied alternations of failure and success, and its ultimate triumph, may not inaptly be compared to the incoming tide upon the seashore, where, although each successive wave apparently recedes as much as it advances, yet the level of the waters is ever rising, slowly, but irresistibly. The investigators of the present having been benefited by the past experiments, are now fast finding out this great element of nature and applying it to the cure of diseases as well as to the great inventions of this progressive period. Again, in regard to statical electricity, up to comparatively recent times, it was produced by a single glass wheel. Holt, however, in 1865, invented a machine by which the quantity and tension can be regulated as desired. Therapeutical considerations of statical electricity, physics and medicine both teach the superior value of static electricity, and its disuse in modern times is simply the result of not giving it fair play. It was abandoned in consequence of the inconvenience of administering it. The fogs and damps of old interferred with its use. But to-day the machine is made independent of atmospheric conditions by being surrounded by a glass protecting it from moisture. Statical electricity now claims the attention of the profession to relieve muscular paralysis of long standing, chronic nervous affections, and to promote absorbtion in cases of old exudations. Charcot has given his adherence to the theory that external application does affect remote internal organs. Inhibition by peripheral

agitation may be found to be the explanation of many of the hitherto unaccounted for facts of static electricity. Again, in torticollis and in a large variety of subacute rheumatic pains, static electricity is an invaluable agent in treatment. In the improved Holt's machine the violence of the shock may be in some degree controlled, a strong shock will cause profuse perspiration and a disagreeable sensation of the stomach.

Selections.

Association of American Physicians.

Third Annual Meeting, held at Washington, September 18, 19 and 20, 1888.

SEPTEMBER 18th.—Morning Session. Dr. J. C. Wilson, of Philadelphia, read a paper on

CAUSAL THERAPEUTICS IN THE INFECTIOUS DISEASES.

Referring to the discussions of Hoffer, Brieger, Vaughan, Bourget, and others in regard to the part played by micro-organisms in the production of ptomaines in the living as well as in the dead body, he stated that much had been done within recent years in clearing up the relation between the specific pathogenic germs of the infectious diseases and the symptomatology of these diseases. Efforts to work out a system of therapeutics directed against these germs have thus far been successful only within narrow limits and chiefly in local treatment, as in surgery and midwifery. Not the germs themselves, but the poisonous principles evolved by the germs in their growth and multiplication cause the phenomena of the effections. Is it not possible that, by acting upon the tissues and fluids of the body therapeutically, the function of these toxic principles may be controlled. In the preservation of meats and other articles from decay, it is the substance itself and not the putrefactive germ that is acted upon. In vaccination and preventive treatment by attenuated virus, the organism—not the pathogenic micro-organism—is acted upon. The paper was based upon five cases of severe enteric fever successfully treated by hypodermatic injections of calomel, and three cases of phthisis, in which the symptoms were greatly ameliorated without any decided change in the local signs, similarly treated. Dr.

Wilson desired the report to be regarded simply as a clinical experiment and as indicating a line of clinical research worthy of investigation. The paper was illustrated by clinical charts showing striking modifications of the usual temperature ranges in the diseases.

Dr. George M. Sternberg said that this subject was a very prominent one to-day, and every experiment has its value. He then referred to a method of treatment of yellow fever, which he had suggested when in Havana recently. Believing that in yellow fever there must be a germ having the alimentary canal as its proper location, and knowing that the secretion in the stomach is unusually acid, and finding the contents of the intestines to be acid, he, therefore, used an alkali, the bichloride, in moderate doses by the mouth. The formula he employed was ten grammes of the bicarbonate of sodium to the litre of water with two or three centigrammes of the bichloride of mercury. He has received reports of thirteen typical cases of yellow fever successfully treated in this way in one hospital in Havana. A series of thirteen cases without a single death certainly speaks very strongly in favor of this method of treatment. He was anxiously awaiting further reports on the subject. With reference to the cases of typhoid fever just reported, he thought we needed a still more extended series of cases. Dr. Wilson spoke in one of his cases of constipation and an elevation of temperature at that point. Perhaps it has not occurred generally to physicians that there is a cause for that, independent of the specific agent. There is in the alimentary canal of man a micro-organism which generates a fever-producing ptomaine. He had made experiments with the bacillus, both with the recent culture and the sterilized one. Two or three cubic centimeters of this bacillus produce a rise of temperature, as does also the sterilized culture. So we have a fever-producing organism constantly present in our intestines. It is probable that the degree of fever may depend upon this organism, which is normally present in the intestine. From the researches made by Ehrlich in Naples with regard to his cholera bacillus, which is normally present in the intestines of healthy persons, and from many recent researches which he had made in Havana, he had come to the conclusion that this bacillus does not confine itself to the large intestine where it belongs, but is found in the small intestine and stomach as well. He simply wished to direct attention to the fact that constipation in these infectious diseases, and

increased temperature, may be due to the production of this ptomaine, and the indication is to keep the bowels cleared out.

Dr. I. T. Dana, of Portland, said that the accumulation of evidence has been such as to attract the attention of the profession to the fact that infectious diseases are due to some form of bacteria. It seemed to him that some remedy could be found which might be safely introduced into the human system and destroy those germs. All who have thought of it, and who have experimented, must have come to feel apprehensive lest no medication could be found that could destroy the germs without, at the same time, destroying the individual; but it seemed to him that the suggestions drawn out by this very interesting paper are full of hope. It seemed to him the tissues of the human body may be so changed that they may be able to resist the action of the germ. The tissues may be rendered non-putrefactive. The ptomaine may be destroyed. By modifying the soil or preventing the activity of the ptomaine rather than by destroying the infectious germ itself in the human system he thought it likely that we will be able to modify these infectious diseases.

Dr. George I. Peabody said that at the meeting last year he had reported a number of cases of typhoid fever treated with naphthaline, and that, in a certain small number of those cases, he had seen a distinct abortion of the disease. His total number of aborted cases was only three, but they were distinct abortions of distinct typhoid fever. The three cases in the first ten or fifteen were the only cases in which an abortion of the fever was secured. He was quite convinced that naphthaline, as a means of aborting typhoid fever, is of very little value. He is at present pursuing the study of intestinal antisepsis in this disease, but his results are not sufficiently conclusive to justify him in bringing them before the Association.

Dr. Jacobi said that, in this connection, he would refer to the treatment of diptheria with the bichloride of mercury. The disease can not be treated by any other remedy as well as by bichloride. It has the advantage of being readily soluble, and, in sufficient doses, counteracts the specific poison. As far as naphthaline is concerned, he has never seen a case of typhoid fever aborted, but he is positive he has seen the diarrhœa get better, and the odor of the movements, as well as their character, changes in a very short

time after its administration. In the diarrhœa of tubercular cases, also, in a large number of cases he had seen good results follow the use of naphthaline, and he is positive it is well worthy of trial.

Dr. W. W. Johnston said that it is necessary that we should recognize the fact that many cases of typhoid fever pursue a downward course, and that we must prove that the remedy materially alters the disease.

Dr. Wilson, in closing, said that he did not claim that this treatment is anything more than a clinical investigation in the direction of general research to discover some method of treatment which appeals more or less directly to the causes of infectious diseases. The prevailing method of treatment is no treatment at all. Symptomatic treatment has no effect upon the general course of the disease, nor does it in any way abort it, and a treatment of expectancy is a confession of our inability to do any more. We are not at all aware of the mode of action of two confessedly curative substances used in the treatment of infectious diseases, viz., quinine in malarial disease, and mercury in syphilis. He was led to make these clinical investigations in consequence of his very successful use of calomel in syphilis, which resisted all other methods of treatment. He has been fortunate enough to escape the production of abscesses in a large number of cases treated in this way. Cases of enteric fever treated after this plan ran a milder course than any he had otherwise treated. His object in presenting this paper to the Association was rather suggestive than instructive, and he trusted no one would regard them as conclusive.

Dr. Frank Donaldson, of Baltimore, then read a paper on

THE DIAGNOSTIC SIGNIFICANCE OF THE PRESYSTOLIC MURMUR,

which will appear in full in an early issue of the *Medical News*.

Dr. J. K. Thacher, of New Haven, said that in these cases of mitral steninosis in which there is reduplication of the second sound, the aortic valves close first and the pulmonary second. This seems to be due, at least in part, to a prolonged ventricular close-time on the right side caused by exaggerated tension in the pulmonary artery, with, in some cases, a shortened ventricular close time on the left side, due to diminished aortic pressure.

The murmurs in mitral stenosis depend on the form and size of the auriculo-ventricular orifice and the strength of the

current. The latter is determined by the relation of the tension in the left auricle and ventricle. The fact recently set forth by Rolleston that, as seen in dogs, there is a marked depression in the tension-curve of the left ventricle, at the beginning of diastole, seems to me to be applicable to the explanation of the initial diastolic (so-called post diastolic) murmurs, whatever views are held concerning the suction action of the left ventricle.

Dr. Osler thought all are agreed that there is one cardiac murmur above another, which is positive and distinct in its diagnostic significance, viz., the presystolic murmur. He had an instance at the University Hospital last year, in which he demonstrated to his class a mitral presystolic murmur. The case was one of cirrhosis of the liver in a child with great enlargement of the spleen. To his astonishment, he found at the autopsy a normal auriculo-ventricular orifice. The heart was pushed up very far. He has recently written out short notes of a case of aortic insufficiency in which there was a distinct presystolic murmur. A woman was sent to his ward in the hospital in an extreme condition of emaciation. He placed his hand over the heart in the apex region and felt a very distinct diastolic thrill, and his ear also detected an extremely loud, rough murmur, which he regarded as presystolic. The woman was not in a condition to permit of further examination. At the autopsy the mitral orifice was found to be normal, but there was extreme aortic insufficiency.

Dr. Donaldsyn, in closing, said in regard the diagnostic difference between the presystolic and systolic murmur, the rhythm, character, area, and direction of the presystolic sound are different from those of the systolic. Not long since he had a case in which the diagnosis of insufficiency of the aortic valve was very easily made without a sign of presystolic murmur. It has been frequently demonstrated that we find mitral stenosis at the autopsy in cases in which we have found a presystolic murmur during life.

Dr. Robert T. Edes, of Washington, opened a discussion on the

ABSOLUTE AND RELATIVE VALUE OF THE PRESENCE OF ALBUMEN AND CASTS, AND OF RENAL INADEQUACY IN THE DIAGNOSIS AND PROGNOSIS OF DISEASES OF THE KIDNEY.

He said that many can remember when the discovery of

the presence of albumen in the urine was regarded as a sentence of death. Albuminuria has held a place in medical literature akin to that of Bright's disease until quite a recent date. He thought there was no reason to discover a symptom which to a physician can have no significance and to a patient is the source of groundless fears. Casts, he thought, were easier to identify than the different forms of albumen. There can be little doubt in the mind of any one that epithelial casts are very significant. There is probably no form of casts so unfavorable as long, large, straight casts, highly granular and fatty, looking like thin white threads. They appear to be made up of degenerated cells. Where amyloid casts have appeared he has never known but one instance of recovery. A few casts may accompany a very slight amount of albumen and have no meaning. Where hundreds of persons have been examined the statement of no casts must be received with a certain amount of allowance. It is interesting to note that in oxalic acid poisoning albumen and casts were found in the urine by several observers.

The term renal inadequacy may be made to convey several shades of meaning. He would consider only the inability of the kidney to secrete water, urea, and other solids. He would not dwell upon this fact further than to say that oxaluria had a very serious prognosis.

The point of great interest is whether we can diagnosticate the early stage of chronic nephritis by a diminution in any one of the constituents of the urine. The statement of many text-books is that 30 to 40 grammes are an ordinary excretion for a healthy man. An amount a little below 20 grammes of urea is not regarded as below the limits of health. On low diet, a patient may excrete 10 grammes of urea a day without any dangerous conditions of the kidney. Chronic nephritis should have advanced to a considerable degree of atrophy before it make itself manifest by diminution in the secretion. It may be safely concluded in cases in which the diagnosis is still doubtful that the determination of the amount of urea passed will give us no assistance. Imperfect nutrition with anæmia is a most frequent cause of diminished urea. It is not passed simply because it is not made. He would consider the presence of cast in the urine as a diagnostic sign of disease of the kidney. As to the examination for quantity of urea, his impression is that it is almost of no value in diagnosis aside

from other symptoms, unless the examinations are carried on for a length of time, and give the total amount, and not merely a percentage, which he considers of no value at all.

Dr. Edward G. Janeway, of New York, said that, if we consider the diagnostic importance of albumen, we are forced to state that it is apt to be overreached and its abscence or presence is very misleading. The existence of an inflammation of the genito-urinary passages leading, as it does, to albuminuria, is liable to add the next greatest difficulty in relying upon albumen in the urine as a diagnostic sign. Fifteen years ago a young man, a patient of his, was supposed to have Bright's disease, from the fact of the presence of albumen in the urine. Suddenly, a marked increase in the albumen took place and numerous pus cells were present. Fifteen years have passed since that time and no evidence of kidney disease has been shown by that young man. In diabetes albumen may be present, leading to errors of diagnosis and prognosis. The presence of albumen in small quantities in lead-poisoning does not lead to the fact that the lead produced chronic nephritis. At times albumen is absent from the urine in cases of waxy degeneration of the kidney.

In conclusion, he would say that a large quantity of albumen in the urine of several examinations points to either acute nephritis, large kidney, or waxy degeneration. Casts, while they are amongst the surest signs of disease of the kidney, may be misleading either by their presence or absence. If, by the microscope, we find hyaline cast present we are to consider some kidney trouble existing. A gentleman of good physique, a candidate for life insurance, whose urine contained casts, applied to him for examination. He applied for re-examination and he submitted samples of the night and morning urine. They failed to show casts. It was learned that he was in the habit of boxing for a half hour, perspiring freely, and then taking an alcohol sponge-bath. From this it follows that hyaline casts may appear in the urine, quickly formed and as quickly disappear.

Dr James Myson, of Philadelphia, then read a paper on

THE RELATION OF ALBUMINURIA TO LIFE ASSURANCE.

He said that medical examiners for life insurance companies have passed candidates who were the subjects of kid-

ney disease. Functional albuminuria means that there is a functional disarrangement somewhere. The majority of medical examiners are not well educated nor well trained. There are three conditions that should govern candidates: first, the applicant must present the signs of good health, extra-renal. Second, the albuminuria should be unaccompanied by casts. Casts and albumen can only receive one interpretation—structura change in the kidney, either acute or chronic. Third, the quantity of albumen irrespective of casts. If the quantity be large, it is unquestionably a proper cause for rejection. Urine which contains one-fifth its bulk of albumen may be certainly styled a large albuminuria. With regard to the specific gravity of the urine during twenty-four hours, the following rule may be laid down: Albuminuria is less significant when the specific gravity is high. When the specific gravity is above 1,020, the assumption is that the albuminuria is functional; if it be 1,010, it would be hazardous to accept such a case, however good his health may be, even in the absence of casts. Signs of hypertrophy of the left ventricle associated with albuminuria are conclusive symptoms of renal diseases, and should exclude the candidate. In persons over forty years albuminuria is not likely to be functional. Such a person should not be accepted unless he has long been under observation. Persons who are the subjects of true gout should not be accepted, because it is followed sooner or later by kidney symptoms. Renal affections should also exclude the applicant, even though no albuminuria be present.

Dr. Jacobi said that to criticize papers of such excellence would be impossible, but he might be permitted to remind them of a simple anatomical fact which may explain the frequency at least in part of inflammatory diseases of the kidneys and the presence of albumen in children. It is true that children have diseases in which kidney trouble is very common. The anatomical fact to which he referred was that immediately after birth there is a peculiar discrepancy between the developement of the renal artery and the growth of the kidney. The arteries do not develop uniformly. There is a certain discrepancy between the increase in growth of the renal artery and the growth of the tissue of the kidney. Besides, the capillaries of the kidneys of the young do not permit the same current of water to be pressed through them in the same time as the capillaries of the adult.

Dr. Pye Smith, of London, said that he had come to learn rather than attempt to give information. We have all felt the difficulty of deciding a case simply from the presence of albumen in the urine. He quite agreed with the author of the paper as to functional albuminuria being, at present, the most convenient term for that condition, because it depends upon several states differing very much from one another and only agreeing in the practical fact that none of them implies, structural organic diseases of the kidney. Physiological albuminuria is a very mischievous one because it leads to the idea that we can overlook as a normal condition what certainly should always awaken a grave anxiety. At present there is no physiological ground for believing that a healthy kidney secretes albumen at all. Those of us who have seen cases of phsiological albuminuria so called will agree with him in saying that they are cases that must be carefully watched in order to prevent them from going from bad to worse and involving the kidney in serious trouble. He happens to be at present physician to a large London insurance company, and he would say that he had tried a great many tests for albumen in the urine, and he was driven back to the old test of heat and nitric acid as the most satisfactory of all. If we introduce new tests and new chemical criteria we would imperil the structure that has been reared during the past fifty years, chemically and pathologically. We can not do better than keep to the results obtained by those two methods.

Dr. F. P. Kinnicutt said that about seven or eight years ago he published a series of cases of albumen occurring in children and adults, in all of whom the albumen existed in a large amount but without the presence of casts. He had an opportunity to keep these patients under observation up to the present time and in none of them has the health been impaired. In all the cases but one has there been a cessation of the albuminuria. It seemed to him that the future of such cases must be of interest to us.

Dr. F. Peyre Porcher said that in yellow fever albuminuria exists and is one of the most dangerous symptoms of that disease. He thought if yellow fever were treated during the first ten hours by large doses of mercury, quinine, and cold water, it might be reduced down to as little danger as any disease that exists.

Dr. Alfred L. Loomis then read a paper on

THE CARDIAC CHANGES IN CHRONIC BRIGHT'S DISEASE.

There are no more important facts to be remembered in our consideration of any disease than the fundamental law of self-preservation. Many so called pathological processes become physiological when viewed from this standpoint. The most constant cardiac changes he has met with are dilatation of the heart's cavities, and degeneration of its walls. In those forms of renal diseases in which the principal changes are in the Malpighian corpuscles and stroma, he had found no cardiac hypertrophy but the changes characteristic of Bright's heart. In all forms of chronic Bright's disease increased arterial tension and more or less compensatory hypertrophy are rare phenomena. Clinical experience teaches that rheumatic valvular disease of the heart may remain latent for many years, during which the heart will perform its functions effectively. Cardiac changes in chronic Bright's disease have a wide range of variation, and one can not predict with certainty the exact changes in any given case, but sooner or later a condition of heart failure will be reached which may be designated as Bright's heart. The more marked the symptoms, the more unfavorable the prognosis. We must regard Bright's disease as a constitutional disease in which the repair and waste are imperfectly carried out.

Dr. Francis Delafield said that he wished to draw attention to several of the propositions presented. In the first place, that cardiac hypertrophy is often developed without any changes in the kidneys except thickening of the middle and inner coats of the renal artery. There can be little doubt that disease of the kidney may begin in the arteries of the kidney, but, as a matter of fact, we seldom find such kidneys at the autopsy. We have to look at this question of cardiac hypertrophy with reference not only to the kidneys but to other parts of the body. In adults and in old persons, we may have a growth of connective tissue in the endocardium, in the arteries, in the lungs, and in the kidneys, and this growth of new connective tissue gives us either the character of a chronic inflammation or, as some people call it, a chronic fibroid degeneration of this part of the body. These changes are much more frequently associated together than otherwise. We do not often find a chronic endocarditis alone, a pul-

monary emphysema, or chronic diffuse nephritis, yet they can exist by themselves.

Another thing about these lesions is, that they are often borne for years without giving the patient any trouble at all. On the other hand, we know that these lesions in other people are the most fatal ones that can be developed. What is the cause of this difference? Certainly one reason is, a certain number of these patients develop in the course of their disease a complicated condition of high arterial tension, which comes and goes in such a way that we are unable to explain it, except by the existence of temporary changes in the walls of the bloodvessels. We know it is one of the chief reasons some of these patients do well and some do badly. It is in this temporary condition of the bloodvessels we have to look for the hypertrophy of the heart, rather than in changes in the structural walls of the arteries. Dr. Loomis also states that morbid changes in the glandular structure of the kidneys, are usually associated with morbid changes in the cardiac walls, and dilatation of the cardiac cavity. This point of dilatation and degeneration of the heart in connection with Bright's disease seemed to be the principal points of Dr. Loomis' paper. His experience differs from Dr. Loomis' in this respect. For himself, he should say that degeneration and dilatation of the heart without endocarditis, is certainly not the rule in chronic Bright's disease. It is not nearly as common as simple hypertrophy of the left ventricle. In many of these patients, when they do badly, we have the evidence of feeble heart during life, but he did not think, if we examine these hearts after death, we would frequently find dilatation or degeneration.

Dr. George L. Peabody wished to allude to one part of the paper in which some observations made by him bear out the statements of Dr. Loomis. Some years ago he reviewed the records of 2,000 consecutive autopsies, and though he had not with him the actual figures produced at the time, in a paper subsequently read by him before the Academy of Medicine in New York, he showed the percentage of cases in which the heart was not hypertrophied in well-marked cases of chronic diffuse nephritis. In these 2,000 cases the number in which this form of chronic Bright's disease was present was very large, for the reason that in the hospitals of New York they have a large proportion of cases of chronic Bright's. In those cases in

which he had recorded notes and made microscopic examination of the kidney, there was a large percentage of them in which there was no hypertrophy. The observations he has made since have borne out the conclusions reached then. He has long since come to the conclusion that, as a means of assisting in the clinical diagnosis of chronic Bright's disease in this country, we have to abandon the clinical evidence of the size of the heart, for the reason that the size of the heart does not vary. These were all hospital cases.

Dr. William Osler thought we might divide the cases of chronic interstitial nephritis into two great groups as we see them clinically and in the post-mortem room. One, in which we have hypertrophy of the left ventricle. These are the cases which die suddenly with uræmia or inflammation of serous membranes. They, in his experiences, have invariably hypetrophy of the left ventricle. There is another group in which there are marked signs of cardiac failure, often associated with dropsy. These have a dilated heart and dilatation of the muscular substance. He regarded that dilatation as a secondary one due to failure in the nutrition of the muscular substance, and in a considerable proportion of cases degeneration is associated with arterio-sclerosis in the coronary arteries.

Dr. Loomis, in closing, said that Dr. Delafield must have made his observations in a different way or for a different purpose than he. He was certain that degeneration of the cardiac walls was present in a larger proportion of the cases than one would be lead to suppose, unless he had made a careful microscopic section.

He did not enter into these investigations with any preconceived views on the subject. He simply took the facts as they came to him. He did not believe the cardiac dilatation was a primary one, but he wished simply to convey the idea that in Bright's disease of the kidneys, whatever the form may be, before the fatal issue is reached, there exists, in a great majority of cases, a degeneration of the cardiac walls. The first unfavorable sympton to him, of a patient with Bright's disease, is the evidence of a failing heart. He did not regard the cardiac hypertrophy as part and parcel of the kidney lesion. It is at the period of middle life we see these degenerative changes, and if Bright's disease develops at this period we are likely to have a hypertrophied heart before the existence of Bright's

disease, He did not say these degenerative changes are the cause of dilatation, but a careful measurement of the cardiac cavities in these hearts that are feeble, where there is some form of degeneration of the muscular fiber, would lead him to believe that degeneration may have occurred only a short time before. In a feeble heart with disturbance in the function of the kidney we must recognize the fact that life can not be prolonged for a very great length of time.

Dr. S. B. Chew of Baltimore, then read a paper on

THE RELATION BETWEEN CHRONIC INTERSTITIAL NEPHRITIS AND ANGINA PECTORIS.

He said that it is well known that some forms of Bright's disease are likely to be associated with organic changes in the heart, and the manner in which such cardiac changes are brought about has been the subject of many ingenious arguments. He quoted cases illustrating the relation between chronic interstitial nephritis and angina pectoris. Cardiac ischæmia, he thought, is brought about more by obstructed disease of the coronaries than by any other cause. A patient may die of angina pectoris without there being recognized at the post-mortem any vascular lesion whatever.

Dr. Peabody said that the fact which Dr. Chew brought out at the close of his paper of the occurrence of angina pectoris without there being recognized after death any vascular lesion, is one of great importance when we consider that a patient may die in such an attack and yet leave no lesion. One clinical fact of importance, that has occured in his experience, is the frequent failure of the vascular dilators to relieve the paroxysm. Nitrite of amyl and nitro-glycerine are of no value except when there is increased arterial tension. These paroxysms are as likely to come on when there is defective arterial tension as when there is an increase.

Dr. Chew, in concluding, said that he wished to refer in his paper only to cases of angina pectoris connected with chronic interstitial nephritis.

AFTERNOON SESSION.

Dr. J. M. Da Costa, of Philadelphia, opened the session with a paper on

THE TREATMENT OF VALVULAR AFFECTIONS OF THE HEART.

which will appear in full in *The American Journal of the Medical Sciences* for November.

Dr. F. C. Shattuck said that in listening to the paper it occurred to him how very desirable it would be to have a heart tonic which would increase the efficiency of the contractions and at the same time not increase the resistance in the peripheral circulation. He should like to ask Dr. Da Costa as to the possibility of strophanthus supplying that desideratum.

Dr. Chew said that his experience with strophanthus was very various. He at one time thought we had in that drug something that would do good to the heart without in any way lessening its powers. Now he is not so sure of it.

Dr. Da Costa said that judging of strophanthus clinically it does not seem to have the power claimed for it; viz., of acting on the heart as well as the arteries.

Dr. Baumgarten, of St. Louis, then read a paper on the

DISTURBANCES OF THE HEART RHYTHM WITH REFERENCE TO THEIR CAUSATION AND THEIR VALUE IN DIAGNOSIS.

He said that intermission and irregularity of the pulse never fail to attract the attention of the physician, and have been the subject of much discussion. Anomalies of rhythm may be classed under the four heads:

1. Mere fluctuations in the frequency of the heart's beat.
2. Variations in frequency, as well as amplitude of pulse.
3. All the numerous changes in rhythm.
4. Types of rhythms.

The rhythm of the incompetent heart can be increased by increasing the demands of the heart. A moderate degree of rhythm in the erect posture often ceases when the patient lies down. We may expect moderate degrees of irregularity in anæmic and cachectic patients. Dilatation from overwork is sure to produce a small, soft, accelerated pulse, and later on an intermittent or wholly irregular pulse. Irregularities of pulse arise sooner in mitral that in aortic disease. Acute myocarditis is characterized by a rhythmic pulse, small and very frequent, and the irregularity is an essential feature in the diagnosis. Sclerosis and narrowing of the coronary arteries are the cause of rhythm. Weaknesss of the heart from any cause makes the pulse frequent. In aged people the heart's rhythm is more easily disturbed than in young people.

Dr. E. T. Bruen, of Philadelphia, said that a short time ago he came across an article in the *Transactions of the Pathological Society of London* in which there were recorded

thirty-seven cases of fibroid heart in which the pulse was markedly slow. He thought it was an important matter to recognize, because it will aid us in the exclusion of fatty degeneration of the heart.

Dr. Edes said very few of these irregularities he had noticed particularly. He was glad to call attention to one thing he noticed, and that was the occasional intermission in certain cases of pericarditis in which a beat falls out or becomes much weaker.

Dr. Osler said there were one or two points to which he would refer: certain individuals suffer with extreme irregularity of heart for years without its producing the slightest inconvenience. In a foot-note to his article in Pepper's *System of Medicine*, he mentions the case of a man who had extreme irregularity of the heart since his fortieth year. Another point to which he would call attention is, in certain cases of mitral valve-disease, extreme irregularity may exist with complete compensation, and an irregularity obstinate to every kind of treatment.

Dr. H. M. Lyman, of Chicago, said that in cases in which there is no valvular lesion, no dilatation of the heart, in which, in fact, the phenomena were merely functional, he had noticed disturbance of the heart-rhythm. Many of them seemed to be entirely due to a disturbance of the excretory organs of the body. He found them manifest themselves in persons of a nervous temperament, overworked, harassed by business, and presenting no lesions of the kidney or heart, or organic changes of the liver associated with some degree of gastro-intestinal catarrh. Such cases as that he found not appreciably benefitted by digitalis, or other heart tonics, but are greatly relieved by measures which tend to stimulate the action of the liver and kidneys. They frequently manifest symptoms of muscular rheumatism. Cases of this kind are very much relieved by laxatives associated with hepatic stimulants, blue pill with a little colocynth. These often give more relief than any specific cardiac drug.

Dr. A. E. Sansom, of London, said that great irregularity of the heart's action is very often consistent with perfect health. He has had several striking illustrations of this. He thought it the bounden duty of the physician, unless this irregularity is associated with cardiac changes, or unless we feel there is dilatation or degeneration, to try and disabuse the patient, and direct his thoughts away from the heart.

Dr. W. H. Draper said that some years ago his attention was called, by an article by Dr. Richardson, of London, to a class of cases which had been alluded to in this discussion, in which irregularity of the heart persisted for many years. Dr. Richardson traced many of these cases to extreme nervous shocks, loss of property, grief from the loss of a relative, etc. He has been able to confirm Dr. Richardson's observation in a number of instances. He would like to ask Dr. Baumgarten if that agreed with his observation?

Dr. Baumgarten, in closing, said that perfect consistency of good health with irregular pulse has been mentioned. The intention of his paper was to try to arrive at a systematic view of all rhythms. Of course, it was not his object to include the exception rather than the rule. The person who observed rhythms with perfect health has, of course, observed a great many more rhythms with imperfect health.—*Medical News.*

Congress of American Physicians and Surgeons.

Abstracts from New York *Medical Record.*

Dr. Samuel W. Gross, of Philadelphia, read a paper entitled,

Connection Between Masturbation and Stricture. In over three hundred cases, eighty-five per cent. of masturbators observed by the author, in which there had not been attacks of gonorrhea or other cause to account for the condition, organic strictures were found. Of these strictures, eighty-two per cent. were within one-third of an inch of the urethral orifice, the remaining eighteen per cent. were deeper, and situated at various points; some single, others multiple.

Dr. R. F. Weir, of New York, remarked that he had found similar constrictions in young infants. He thought too much stress was placed upon these constrictions in masturbators as pathological products.

Dr. R. W. Taylor, of New York, said that in these cases he had found tumefied bands or constrictions by endoscopic observations.

The President called attention to the existence of normal constrictions in the urethra, demonstrated by Weir by means of casts of the urethra, and, more recently, by Antal by the use of his evo-urethroscope.

In reply, Dr. Gross thought there could be no doubt as to the existence of those strictures which he had described at or near the meatus, whatever was said of the deeper ones. In his cases often there was severe pain on passing the bulbous explorer, and bleeding in some, and in some other cases the patient was anesthetized, so that spasm was eliminated in these cases at least.

Dr. Edward L. Keyes, of New York, read a paper on, *The Curability of Urethral Stricture by Electricity; An Investigation.* The object in making this study is an endeavor to clear up the mists which have hitherto surrounded it, and by unprejudiced personal clinical study to find what results could be obtained. Dr. Keyes' previous acquaintance with electricity in the urethra was a trial of the old method, that of Mallet and Fripier. The result upon ten cases treated in December, 1871, at Charity Hospital, was total failure in all. The new method of electrolysis—mild currents at long intervals, the method known most familiarly as that of Dr. Newman— has been tested in the present communication; seven cases from dispensaries form the material from which conclusions were reached. Three were treated by Dr. Keyes, three by his assistant, Dr. E. Fuller; one by Dr. Robert Newman, who kindly consented to accept the case in order that he might demonstrate the efficacy of the treatment by the result; all were total failures, the case treated by Dr. Newman apparently the *most* conspicious failure. One other case of spasm without organic stricture is mentioned in the paper as having been (possibly) benefited. Another case of the disastrous results of the use of strong currents was exhibited in the person of a patient treated by another physician. His study, Dr. Keyes concluded, of the subject, and the experience it had brought him, digested with all the impartiality he possessed, led him to state that the claim that electricity, however employed, is able to remove organic urethral stricture, lacks the requirement of demonstration.

Several members related their experience with electricity in treating stricture, all of which tended to corroborate the conclusions of Dr. Keyes.

Dr. Philip C. Knapp, of Boston, then read a paper entitled,

Some Nervous Affections Following Injury (Concussion of the Spine, Railway Spine, and Railway Brain). He reported seven cases, and drew the following, among other inferences:

Concussion of the spine, although probable, is a matter of doubt. Muscular strain, spinal irritation, and peripheral neuritis are not uncommon complications. Injuries may give rise to gross mechanical lesions, but also to chronic, insidious, degenerative processes, to functional affections, psychoses, and states of hysteria and neurasthenia. Both hysterical and neurasthenic states may be superimposed upon organic disease, thus obscuring diagnosis.

Dr. E. C. Seguin was disposed to agree with the author. The possible deception of patients must be borne in mind. In some cases hysterical or neurasthenic states antedate injury. Subjective symptoms are of doubtful value, because they may be simulated or the result of auto-suggestion. Simulation of the most complex nervous diseases may be produced by the new hypnotism, either through suggestion of an operator or by auto-suggesiton, as has been pointed out by Bernheim. He referred to publications of his in 1875 concerning the co-existence of hysteria with organic diseases of the brain and cord. There is no doubt of the reality of neurasthenic conditions following severe physical injuries or moral shocks.

Dr. L. C. Gray said that it would, in medico-legal cases, be necessary to demonstrate clearly to a jury the facts which are learned. It is sometimes hard to discriminate between malingering and actual suffering. People injured are followed up by runners for lawyers, and by them impressed with the dangerous nature of their injuries. Then the slow processes of law force them to remain in a condition of ill-health. They can not afford to get well for fear of a conspiracy. This develops in the patients a physical condition worse than hysteria,

Dr. Zenner bore witness to the fact that hysterical symptoms occurred in a great many cases of organic disease. But functional troubles are really due in great part to impairment of the nervous system. He saw a case of tremor lately, following mild lead-poisoning, where two or three applications of hypnotism removed the tremor. Deception by a patient should not lead one to believe that there is no injury present. Pure malingering is very rare.

Dr. Putnam agreed with Dr. Zenner, as to malingering. The simulation of hemianesthesia is so difficult that when present it is a valuable aid to diagnosis.

Dr. Knapp closed by saying that the tendency to auto-

suggestion would naturally be greater in medico-legal than in other cases.

Dr. V. P. Gibney, of New York, read a paper entitled, *Report on the Treatment of Club-Foot by Means of the Thomas Wrench, or "T. T."* The wrench presented was a modification of that of H. O. Thomas, of Liverpool, and consisted of a modified monkey-wrench, with arms jutting out from the side, which are made to grip the astragalus and plantar arch by a screw movement, and then by the leverage of the handle the foot is twisted and forced into shape. He uses the wrench with or without etherization, and alone, or as an aid to tenotomy. The foot was to be corrected at once if possible (in congenital cases), but the operation should be repeated again, or as many times as may be necessary. Twelve cases were reported in detail, which, after having been treated by manual wrenching and Knight's brace for long periods without a curve, gave, under the use of the above treatment, good results. As after-treatment, a shoe, built up along its outer border, was advised. In the older cases two or three operations were necessary; but in the younger usually one sitting was sufficient. Five paralytic cases were not difficult to manage.

Dr. Ridlon, of New York, showed a wrench, also a modification of Thomas', to be used for the same purpose, and as an osteoclast in a badly united Colles' fracture. It differed from the wrench of Dr. Gibney in having the grip-rods straight and in having a spring-grip which could be instantly released by pressing a trigger. It was modified from a "Utility Wrench." The subject was discussed by Drs. Bradford, Steele, Moore, Vance, L. H. Sayre, Whitehead, Hodgen, Ryan, and Shaffer.

Dr. H. Hodgen, of St. Louis, read a report on, *Morton's Method for the Immediate Reduction of Club-Foot.* A detailed account of eight cases was given, and the following deductions were drawn:

1. Tenotomy for equinus should be made first, and the deformity at once reduced.

2. Immediate reduction of the deformity is the proper procedure. Saves time and pain, and the correction is more certain.

3. It can be used in all cases with safety, but has no advantage over hand-pressure of the surgeon in young subjects when the tissues are soft.

4. There is no need of preparatory treatment of the tissues by poulticing.

5. Force should be applied inward, downward, and slightly forward, until the tissues are felt to give way.

6. Plaster-dressings applied with the foot in the position of valgus, allowed to remain on for two months.

7. The bursa will have nearly disappeared when the cast is removed, and they are not as a rule, tender.

8. The use of the club-foot shoe for some time, in which pressure can be made in the direction of the crushing force.

9. A marked rise of temperature is not to be expected, and when this and pain are present we must look to the plaster as the cause in a large percentage of these cases.

Dr. E. H. Bradford, of Boston, then read an

Analysis of Treatment of Seventy Cases of Club-Foot. He said that the clinical memoranda should include the record of imperfect results and failures, and if posible, an investigation of the causes of failure. A detailed statement of the pathological anatomy of club-foot is unnecessary, as it has been thoroughly investigated and admits of no dispute, for it is well known that there is not only a misplacement of the foot, but also always a distortion of the bones of the foot and shortening of some of the ligaments and soft tissues, including, of course, the tendons. The chief distortion is in the astragalus, the neck and anterior facet being inclined to the side. The treatment requires:

1. A rectification of the misplaced bones.

2. A retention in a normal position until the abnormal facet of the astragalus renders the pressure of the new position normal. An examination of the current literature of the subject shows much diversity of opinion as to methods.

The following questions in regard to the treatment are at present unsettled:

1. In what cases is it advisable to correct and treat by mechanical means alone, without the help of any operative interference, even tenotomy?

2. When is tenotomy advisable?

3. Can severe cases be entirely corrected and cured without tarsal resection, or osteotomy?

4. Is tarsal resection, or osteotomy, a justifiable operation?

These questions are answered by the tables of cases, thus:

1. That the cases of infantile club-foot can, as a rule, be thoroughly and efficiently treated without tenotomy, by mechanical correction and mechanical retention alone.

2. That in older cases tenotomy aids the correction, and is not injurious to the permanent result.

3. That resistant cases of the severest type can be corrected without tarsal osteotomy.

4. That in some cases of resistant club-foot tarsal osteotomy is needed for perfect rectification, and is not only justifiable, but may be indicated in exceptional instances.

Dr. N. M. Shaffer, of New York, then exhibited a brace for the treatment of varus, applied to the outer side of the leg and foot, and intended to *pull* the foot into position.

In the discussion which followed upon the papers of Dr. Hodgen and Bradford, remarks were made by Drs. Moore, Willard, Vance, and Steele.

Dr. George W. Ryan, of Cincinnati, reported a case of

Reflex Valgus in a boy ten years old. The condition appeared three or four weeks after a reported slight sprain. There was no swelling or pain, and the only symptom presenting was the unusual contracture of the peroneii group, which was intensified if it were touched, or any attempt made by means of apparatus to correct the deformity. There were no spinal symptoms, and no other hysterical symptoms; the patient resented treatment, and wished to resume his accustomed play. The treatment which was prescribed was not followed, and no change in the condition had occurred when last heard from, some eight months after he came under observation. The paper was discussed by Drs. Gibney, Vance, Judson, Sayre, and Shaffer.

Dr. A. B. Judson, of New York, read a paper entitled: *A Practical Point in the Treatment of Potts' Disease.* The author believed that, in the unsatisfactory state of the treatment of Pott's disease, it would be well to judge of the efficiency of mechanical treatment by the impression made by the apparatus on the skin covering the projection. He thought the object of treatment was three-fold: to fix the diseased bones, to transfer pressure from the bodies to the processes, and to reduce the deformity. If the skin near the summit of the projection becomes thickened and callous,

which it does without discomfort if the pressure is carefully increased from time to time, it is to be considered that the apparatus is acting as it ought to, and when the greatest pressure is made compatible with the integrity and comfort of the skin, the apparatus has reached the limit of its efficiency. This rule is less applicable to the treatment by suspension and the plaster-of-Paris jacket. He would not say a word against the plastic apparatus. In the hands of the general practitioner plaster-of Paris gives relief to many cases which would otherwise have no mechanical treatment. But the orthopedic surgeon can do better by the use of tractable steel modified to fit the varying needs of the patient with the mechanical skill which belongs to practitioners of that class. The author further agreed with Dr. Shaffer in the importance of avoiding, as much as is practicable, the application of water to the skin, which is subject to pressure.

The paper was discussed by Drs. Moore, Ridlon, Whitehead, Steele, and Shaffer.

Dr. John H. Packard, of Philadelphia, read a paper on, *Supra-Pubic Cystotomy*. The present paper was supplementary to one on the same subject read by Dr. Pakard at the last meeting, and was intended to correct an accidental omission of the views of Sir Henry Thompson. These were now considered, extensive quotations from the works of this author being given. Two cases were reported, in one of which the operation was performed for the removal of a portion of a silver catheter broken off in the bladder; and in the other, for the removal of a piece of rubber catheter, said to have been broken off several months previously. In this case, a stone weighing five hundred and seventy-one grains was removed, in the interior of which was found the *foreign body*.

Dr. S. W. Gross, of Philadelphia, thought that Dr. McGuire was to be congratulated on having introduced a new operation, based upon the mechanism of the bladder and the physiology of micturition—the formation of an artificial urethra in a new position. The various operations which had been performed for the relief of prostatic obstruction were next referred to, the operations of Harrison, Mercier, Bartinini, and McGill being considered.

Dr. William T. Briggs, of Nashville, thought that perhaps in the cases reported by Dr. McGuire a better result might have been obtained by lateral lithotomy, provided the stone

were not too large to be removed by that route, for he had noted that after incision into the prostrate, the gland diminished in size.

Mr. Reginald Harrison, of Liverpool, said that there are two general methods of relieving obstruction due to enlarged prostate, one by attacking the gland through the bladder, and the other through the perineum. In his operation he makes a median or lateral incision through the perineum, according to circumstances. The obstructing prostate is next divided with considerable freedom, and a drainage tube of considerable size introduced. From this operation he gets good results. Perineal lithotomy is preferable to the supra-pubic operation, because the lateral incision gives sufficient room for all manipulations. It gives an ample opening for the removal of a stone of considerable dimensions. It also permits of the more or less permanent drainage which these cases require. He had also, through a perineal opening, used the perineal lithotrite with success. All methods of operation should be remembered, and each employed in those cases where it seems indicated.

Professor Thomas Annandale, of Edinburgh, had come to the conclusion that if an operation is to be performed for the relief of prostatic obstruction, the perineal operation is the best. This allows of examination of the bladder, permits drainage, and probably causes a diminution of the hypertrophy. It enables you to occasionally remove a portion of the enlarged prostate when this assumes a pedunculated form. The speaker exhibited a rubber tube which he had found useful in cases of Harrison's operation when a permanent tube is required.

Dr. A. Vander Veer, of Albany, said that the testimony presented in his paper last year was in favor of the perineal opening so far as drainage was concerned. He had employed Harrison's operation in a number of cases and the results had been such as to impress him favorably.

Mr. Arthur Durham, of London, emphatically endorsed what had been said in regard to operation of stone, that no one operation is applicable to all cases. It is a great mistake to be men of one method, especially in surgery. When we hear a man say that he treats all his cases of fracture in such a way, all his cases of stone in such a way, and all his cases of prostatic disease in such a way, we may be sure that such a man has a very small practice and experience or else is a very great fool. In cases in which stone in the bladder is

complicated with enlarged prostate, the perineal incision seems to me to be better than the supra-pubic.

Professor Hingston, of Montreal, believed that the supra-pubic operation was one to be performed only in exceptional cases. These he classified as follows: 1. In those cases of stricture in which the obstruction can not be overcome in time to relieve the patient of great suffering. 2. In cases of prostatic obstruction. 3. In cases of tumors of the bladder which would interfere with the lateral operation. 4. In cases where the stone is too hard or too large to be removed either by lithotrity or by lateral lithotomy. He had himself removed, without injury to the soft parts, a stone weighing five ounces and five drachms.

Sir William MacCormac, of London, had performed the operation of supra-cystotomy occasionally. He had never seen any untoward consequences, and the operation seems to be devoid of all risk. He did not consider that drainage was necessary after this operation. The bladder empties itself freely and the drainage-tube is a source of irritation.

The President, Dr. D. Hayes Agnew, being called upon, said the ground had been so thoroughly covered that there was little to be added. He agreed with those who held that no single operation was applicable to all cases. The supra-pubic operation may be appropriate in certain cases, while in others the perineal operation is the proper one. In order to avoid the unpleasant consequences which occasionally follow the perineal operation in children, where the prostate is small, I avoid the introduction of the finger into the bladder, and remove the stone with forceps not much larger than the staff.

While there may be no danger in the supra-pubic operation in skilled hands, yet with the inexperienced operator there will be risk of opening the peritoneal cavity. He thought that a number of cases had been reported of rupture of the bladder following injection of the organ after dilatation of the rectum with the rubber-bag.

Pyosalpinx and its Surgical Treatment.

This interesting paper contains a summary of 31 cases of laparotomy, undertaken by Dr. Gusserow, during the last three years, for the surgical treatments of pyosalpinx. Under the term pyosalpinx are included only those cases in

which the collection of pus in the Fallopian tubes constituted the primary disease; purulent collections in the oviducts, when occurring as a complication of other pelvic diseases, such as uterine fibroids, are excluded from the list, as are also cases of hydro-salpinx and hæmato-salpinx.

In every case recorded in the paper, evidence was obtained of preceding or accompanying perimetritic attacks. Indeed, Dr. Gusserow looks upon perimetritis, and the consequent closure of the uterine opening of the oviduct, as an essential condition for the production of pyosalpinx. The longer the duration of the perimetritis and the severer its character, the more likely is it to lead to pyosalpinx. In many of the cases there was reason to believe that there had been antecedent attacks of gonorrhœa; in several others the history was strongly suggestive of such attacks. In many of the earlier cases the contents of the oviduct were submitted to microscopic investigation, but the conclusion come to with regard to the existence of gonococcus was invariably a negative one. Parturition and abortion are alluded to as additional antecedents of pyosalpinx; in one case curetting of the uterine endometrium preceded the disease.

The presence of labor-like pains during or shortly before the menstrual peroid is frequently noted in the history of the cases. Dr. Gusserow looks upon these pains as highly suggestive of pyosolpinx, but not pathognomonic of it. They are sometimes entirely absent in cases of pyosalpinx, and, on the other hand, present where there is no purulent distension of the oviduct. Irregularities of menstruation, especially a tendency to menorrhagia, were noticed in the majority of cases. The more the tumor interferes with the circulation of the uterine vessels in their course through the broad ligament, the more pronounced are menstrual irregularities likely to become. Not infrequently the history of these cases of pyosalpinx is one of prolonged suffering, so that it would appear that, contrary to expectation from general surgical principles, pyosalpinx may exist for many months, if not years. In many of the cases the usual pelvic pains are increased considerably from time to time; in others the disease apparently begins after an accidental fall or injury, as an attack of acute perimetritis. These are to be looked upon as recurring attacks of local perimetritis, due to the accidental discharge of minute quantities of pus from the oviduct into the peritoneal cavity. If the possibility of the presence of an active or latent pyosalpinx be

kept in mind, we may account for the onset of dangerous results which sometimes follow slight gynecological operations, such as the introduction of the uterine sound, the production of artificial prolapse, descission of the portio vaginalis;, etc.

The differential diagnosis of pyosalpinx is not always easy. The situation of the tumor in intimate connection with the broad ligament must be kept in mind as a reliable landmark. As a rule, there is no difficulty in diagnosing a pyosalpinx from a small fibroid, but it must be remembered that, as recorded in one of these cases, pyosalpinx of one or both tubes may exist as a complication of uterine myoma. It is not easy in every case to distinguish clinically ovarian from tubal growths; indeed, even after their removal, it is sometimes difficult to determine by a cursory examination which is ovary and which oviduct. Fortunately, such exact diagnosis is uncalled for as far as the essential treatment of the case is in question. It must be remarked that from a diagnostic point of view, a valuable source of information is the chart of the pelvic and the general bodily temperatures. There is no mention of any such observation having been made in the history of the cases under consideration.

For the ultimate success of the operation, Dr. Gusserow thinks it necessary, first, to minimize the chances of the subsequent formation of hernia; and, secondly, to assail all cases leading to attacks of parametritis or recurring perimetritis. The chances of hernia are diminished by making a small incision. This adds apparently to the difficulties of an operation, often as difficult as any in abdominal surgery; but in reality a long incision in no way lessens the difficulties peculiar to this operation. These arise mainly from the imbedding of the diseased tube in the surrounding tissues, and from the inaccessible situation of the mass deep in the pelvis. Dr. Gusserow insists strongly on the raising of the uterus and the appendages through the vagina by an assistant, to render the field of the operation more accessible to the fingers.

The question as to whether one or both tubes and ovaries should be removed is not decided. It is urged that removal of both ovaries and tubes brings on early climacteric, with its consequent comparative freedom from risks of perimetritis and parametritis. In practice, however, Dr. Gusserow removes the tube which is diseased with the cor-

responding ovary, and it is noted that a patient subjected to this one-sided operation, subsequently gave birth to a child. It must be remarked, however, that this woman, as well as another one mentioned in the paper, had to undergo a second operation at a subsequent date for the removal of the other tube and ovary.—*A. Gusserow, Archiv. für Gynäkologie.—Med. Chronicle.*

Gynecology and Obstetrics.

BY A. LAPTHORN SMITH, M.D.

Lecturer on Gynecology in Bishop's Medical School, Montreal.

DR. ROBERT BELL (*Br. Gyn. Jour.*) thinks that disease of the tubes and ovaries begins primarily in the endometrium, and that most cases of displacements are also due indirectly to the same cause. He, therefore, makes the mucous membrane of the uterus the principal object of treatment. In this point he agrees with Apostoli, but he differs from him in thinking that electricity has no advantages over iodized phenol (320 grains iodine to 8 ounces liquid carbolic acid), which he has employed in over 2,000 cases. He says that he has frequently seen cases of salpingitis get completely well under the treatment of the endometritis. He calls attention to the fact that the pain caused by an application to the endometrium is generally referred to the ovarian region. When there is a granular condition of the endometrium, or if there is a rupture of the perineum, he thinks that these conditions should be cured before commencing the iodized phenol treatment. It is interesting to note that he considers 16 to 24 intrauterine applications made weekly and double that number of glycerine of alum and boracic acid tampons applied bi-weekly a reasonably small number with which to effect a cure. I quite agree with him when he says that the toning up of the relaxed uterine walls is the true method of curing deformities (which is the name I gave to flexions in contradistinction to displacements, which I limit to versions and prolapse). Unless there is metritis, he does not fear to turn the applicator around in the uterine cavity and to leave it there a minute or so. If there is metritis he first reduces it with tampons, &c. He says that this intrauterine medication is frequently followed by the cure of both versions and flexions. This has been

my own experience with iodized phenol; but I must also say that my results with the positive intrauterine galvano cauterizations have been much more speedy in appearing, with few exceptions only requiring five or ten applications. He is mistaken when he says that none of Apostoli's disciples seem to have any positive idea how it acts, or which pole should be inserted in different circumstances. A careful perusal of Apostoli's book on chronic endometritis would make this point as clear as day to him.

Dr. G. R. Southwick (*N. Y. Med. Jour.*) reports several cases of uterine displacement cured by ventral fixation, that is, sewing the uterus to the abdominal wall. In former numbers of the *Journal* I have not spoken very favorably of Alexander's operation for the cure of displacements, owing to the difficulty experienced in finding the round ligaments and to the danger of leaving a hernia. Since I have seen the operation performed without general anæthesia, but merely by the aid of a hypodermic injection of cocaine, and by the improved method of Dr. Kellogg, of Battle Creek, I have been led to think more favorably of it. While visiting the large sanitarium at that place last month, Dr. Kellogg kindly operated on a case which he had been keeping for me, and I was astonished to see how freely he used cocaine. During the course of the operation, including two sides, he used a syringeful containing four grains of hydrochlorate of cocaine. In other words, this lady received in the course of half an hour four grains of cocaine divided into four injections of a grain each, and with no ill effects whatever. During the whole time, she was watching the operation and asking what each thing was as the Doctor picked it up with his forceps or hook, with the exception of a few minutes, when he insisted upon her laying her head down. Dr. Kellogg has performed the operation sixty-five times, and the most of them with an important modification. Instead of looking for the terminal extremity of the ligament where it is merely a thin aponeurotic expansion, he makes his incision directly over the line of the inguinal canal between the internal and external abdominal ring, when, on making a tiny incision in the aponeurosis of the external oblique, the red fleshy muscle of the belly is seen. This is hooked up with a small strabismus hook and it is pulled out of its sheath as far as it will come. The uterine end of the loop is then stitched to the wall of the canal and the two inches or so of slack are carefully tucked back

into the canal. Fine iron dyed silk is used and the operation is performed antiseptically, his results being very good. The only time the patient complained of pain was when he was pulling out the muscle from its peritoneal sheath. It is probable that cocaine is destined to take a still more prominent part in gynecology and surgery generally. Dr. King, of New York, in a private letter, tells me he uses it invariably in applying electro puncture to uterine fibroids through the abdominal wall, an operation which he has performed over 400 times.

In the *British Medical Journal* there is an article on the treatment of cancer of the uterus by carburetted hydrogen mixed with equal proportions of olive oil. Of course, it is only palliative.

Dr. J. H. McBride, in the *Medical Standard*, reports several cases of paralyses and neuroses in uterine diseases; but I think they are pseudo-paralytic symptoms, such as are due to dyspepsia, as I have frequently seen the same symptoms in dyspeptic men, in whom there was no nervous disease whatever.

Dr. W. Gill Wilie (*College Medical Journal*), in a very interesting article, strongly recommends boro-glyceride and cotton as a substitute for the pessary; but he says it is a mistake to regard a simple displacement of the uterus as a disease, although it is frequently associated with serious diseases. As a rule, if the disease is cured, the displacement is of little consequence, and the pessary is only a helping instrument, that it is only palliative, and that its use alone is not good practice. He uses with great success one ounce of boro-glyceride and enough of pure glycerine to make a pint, and one ounce of sulphate of alum if he requires an astringent; if not, the acetate of aluminum. He takes the borated cotton, which comes in flat sheets, rolls this firmly into a roll about one inch in diameter and two inches long, tying it with a good flax string at the end; this, thoroughly saturated and put into the vagina, will retain the shape for four days. It will stay where it is put, and in four days it will be in almost the same position. For the first twenty-four hours after it is introduced there will come away a profuse watery discharge, from four to eight ounces or more, in proportion to the condition of the uterine vessels.

His method of introduction is as follows: Place the patient in Sims' position, then introduce Sims' speculum. After

saturating the cotton thoroughly, pull back the perineum and push the cotton against the cervix, and let the cervix rest on the anterior part of the cotton. Hold the cotton in that position and remove the speculum. The anterior portion would then lie in the direction of the pubic bone, and thus acts as a pessary, because the perineum springing up against the cotton, keeps it in place. The action of the boro-glyceride is to prevent any kind of ferment or change. It has a good effect in catarrhal conditions and does not interfere at all with the action of glycerine and alum in producing the watery discharge. He leaves it in for twenty-four to seventy-two hours; then washes out the coagulated mixture, and in three or four days makes a second application. If there is much dragging sensation, he tells the patient to wear it for two or three days.

The watery discharge that comes from the mucous membrane not only of the vagina, but of the uterus, forces a rapid circulation through the pelvic vessels. It acts in the manner of hot poultice, by getting up an active circulation through the tissues, thus bringing fresh and healthy blood to the tissues; in that way it helps to eliminate diseases. He says he can take a case of sub-involution of two or three months standing, with the dragging sensation and more or less discharge, and in from three to six weeks he will reduce the uterus to its normal size, using nothing else but this cotton. I can heartily endorse this treatment, as it has enabled me to entirely discard pessaries.

The exosmotic action of glycerine can not be too highly appreciated in cases of passive engorgement.

Dr. Henry Rutherford, in the *British Medical Journal*, reports a number of cases of fibro-myomata, in which he obtained marked diminution and in some cases complete arrest of hemorrhage by the use of fifteen drops, thrice daily, of tincture of hydrastis canadensis.

In the *Chicago Medical Times* Dr. A. L. Clark has an article on the treatment of painful menstruation by viburnum. I notice, however, that it required from five to six months to obtain relief from the pain. I would suggest to him, fine wire faradism.

In the *Synopsis*, Dr. Joseph L. Bauer reports a case of retroflection of the uterus completely cured by Brandt's method of massage, which consists in introducing the right index finger into the vagina, so as to reach and elevate the uterus, the left hand on the abdomen compressing the

uterus against the right index finger, the organ thus being alternately elevated and compressed during five minutes' time and repeated every other day. It is but right to say that glycerine and tannin tampons were used at the time.

From a discussion going on in some of the journals it would appear as if cutting the cervix for stenosis may again come into fashion; but I think that it can not compare in safety and permanence of results with Goodell's rapid dilatation.

Laparotomists, who use drainage tubes, are beginning to realize that they can not drain against gravity. They are, therefore, either draining into the vagina through Douglas cul-de-sac, or when they drain through the abdominal wall they keep the patient on her side.

Doleris, in Paris, and Martin, in Berlin, are treating diseases of the uterus entirely by plastic operations on the anterior and posterior vaginal walls and perineum.—*Canada Med. Record.*

Neurokinesis and Resulting Neural Atrophy.

THE COMMON NERVOUS TROUBLE OF OLD SOLDIERS.

Reported for MEDICAL NEWS.

MR. PRESIDENT, officers and members of the Northen Kansas Medical Society:—

Pardon me for asking you why it is that the ex-soldier's hand trembles? Why is his gait unsteady? Why these failures of memory and will-power? Why is he so sensitive to thermal changes, or why, I should have said, this permanent unbalancing of the heat-regulating mechanism of the soldier's body?

Why is it that he is so often disqualified for making the best possible adjustment or even an average adjustment of his surroundings? Why does he so often fall behind his competitors in the struggle for existence? Why this tendency to mendacity, so heartlessly mentioned in a recent issue of a leading daily paper? What is the cause of the aches and pains that he will persist in calling rheumatic? Why that stiffness when attempting to mobilize himself? What has become of his ability to make fine mental and muscular adjustments? Why, in short, did the ex-soldiers age young?

This is no fiction of the imagination. You can find evidences of these physical defects in this pre-eminently soldier state on every hand—they are visible to every competent observer and so very common that they have been almost entirely overlooked.

Men think, reason, remember, will and act by reason of their having a nervous system, and it is to state a very simple truth when we say that defect of function always follows a defect of nerve-structure. The converse is also true that when the nervous system functions defectively, it is evidence of a defect within itself, and when it functions defectively for long periods of time the defect is undoubtedly structural.

The life of our soldiers of the late war was one continuous hardship to the nervous system. It was characterized by continuous discomfort to the body in general and the nervous system in particular.

When the brain of man functions as courage in the presence of great and imminent danger, it does so at a great sacrifice of energy, and there can be no great sacrifice of energy without injury to the physical substructure that has functioned as energy.

Gen. Sheridan was honest enough to say that he was "d—d afraid" in battle; that it was all a question of the power of the mind over the body.

For every one hour of battle, there were hundreds of hours of the brain tension of expected danger.

One of the prominent factors in the deterioration of the soldier's nervous system was loss of his regular sleep in a comfortable bed.

The wear and tear of the soldier's organism was never compensated for (and under the circumstances of war never could have been) by adequate rest and refreshment.

The nervous system of man is the highest known product of organic evolution in the universe; or, to put it in harmony with prevailing belief, it is God's best effort.

In the hemispherical ganglia of the human brain, matter rises to the dignity of thought.

The structure of the nervous system is delicate and complex beyond all other things—it can not be abused with impunity, although long intervals of time may exist betwixt the infliction of the injury and the after effects that never fail to follow if life is sufficiently prolonged.

These nervous defects did originate in the service of the United States, and in the line of duty, and they are pensionable under the existing laws; but what does the pensioner know about neuro-pathology? He knows that he tires readily when engaged at manual labor that a sound man performs with ease; that his wind (as he expresses it) gives out, and that somehow he is not well; being unversed in medical nomenclature, he is at a loss to give a name to his ailments, and consequently can not in many cases go to work properly and lay the foundation of a well-deserved pension claim.

My purpose in writing this article is for the ex-soldier's good and his country's honor. It is to call your attention to these disabilities that are so common as we have stated above that we are apt to overlook them.

In presenting this paper, I have no other axe to grind; I did not come here to peddle any wares; I did not write this to advertise any fancied superior wisdom; but I am here to point out a way whereby every one of us can conscientiously help some deserving man before the end of this week, if we will but look around us for the opportunity.

Dr. Stearns, of Lynn, Mass., has suggested the word Neurokinesis to express in brief the common nervous troubles of the ex-soldiers. It would seem that Neurokinesis, meaning a shaking up of the nervous system, should be applied to the cause of these troubles, and that neutral atrophy would better express the present condition as we find them in these cases to-day. I am aware that the words neural atrophy involve a pathological hypothesis, but it is an hypothesis resting on grounds that appear to be impregnable; but for that matter a pension claim can be brought before the pension bureau under the broad heading of nervous disability, which words in these cases do not involve any guessing whatever.

I shall state a truism when I tell you that these nervous defects are the outcome of a permanent and (as a rule with but few, very few, exceptions) incurably diseased nervous system. There is a physical basis beneath all of these defects of function.

The subjective face of unnatural and unhealthful nerve function is always pathological.

One of the rare and extreme forms of these common nervous troubles is a tendency to mendacity, but will we

ever forget that mendacity is always the outcome of defective cerebral organization, that even bad habits have a substratum of abnormal cerebral neurine; that the same neurotic abnormalities that provoke an appetite for stimulants, also hold the will-power in abeyance; blunt all of the higher mental faculties, and that the best part of mind was the latest to be evolved, the least stable and the first to suffer in any progressive degeneration of the nerve centres that function as mind?

Before leaving this subject I desire to call your attention to the date of origin of these nervous defects of the veterans of the late war. They began when the young soldiers left a comfortable home and entered an unhygienic environment, and they are the outcome of the sum total of all of the hardships experienced by the soldier while in the service of the United States and in the line of duty during all of the years, months and days of said service, as shown upon the muster rolls containing their war records and which are now on file in the War Department of the United States.

Somebody is to blame for the neglect to pension these men for the disabilities herein above mentioned—the fault is not with the Pension Bureau; it can not issue pensions for nervous disability until a formal demand for it has been made; the fault is not with the soldier, for he is incompetent to know very much about pathological matters. The fault lies with us and others, who are medical advisers of these men, because certificates of disability upon which to base a pension claim must necessarily in the majority of cases come from the family physician. Let each and all of us resolve to make amends for past neglect and contribute of our knowledge and diagnostic skill to help these men obtain their just dues.

No country can afford to treat its brave men grudgingly, and no generous man would object to the pensioning of these disabilities.

The common nervous troubles of soldiers are the legitimate *sequelæ* of the degradation of nerve structure that had its origin in the Neurokinesis of battle, in the tiresome watches of sleepless nights, in exposures to thermal extremes in the ever-varying vicissitudes of climate. They came of malarial saturation; they were born in prison pens, while Infinite Mercy slept. Andersonville was fruitful of causation in this direction—Andersonville, over which God, for some inscrutable reason, spread a pall that was imper-

vious to prayer— they only need to be looked for to be found, and they should be found, and they should be recognized and brought to the attention of the government by us, that justice may be done to these brave men who can not obtain it of themselves.

There is a form of progressive nervous disease that has its origin in a painful scar of cicatrix that has been insufficiently noticed by medical writers except in what is known as painful stump. A painful cicatrix means a neuritis ; and it is the law of neuritis to proceed along the affected nerve centripetally until the spinal cord is involved, and sometimes the mischief extends to the brain, and the victim becomes a total wreck.

Pardon me for inviting your attention to the entanglement of nerve fiber in cicatrial tissue—the Gynecologist HAS appreciated this pathological condition at its true value, but it is capable of giving rise to untold miseries in other localities than the cervix uteri

A neighbor received a gun-shot flesh-wound of his right arm that was followed by gangrene that finally healed, leaving a rather large but painful cicatrix, which gave rise to a painful arm, and finally epilepsy supervened. His present condition is that of dementia and a general paralysis— his face wears an idiotic leer. In a few more months the degradation of nerves-tructure will have reached limits that are incompatible with life.

And now a word about the unhinging of the heat-regulating mechanism of the soldier's body. It reminds us of the famous leaning tower of Pisa. A lesser force would be required to overturn it than a similar tower that stands erect. It is possible for this defect of the so-called heat-regulating center of the soldier's nervous system to make all of the difference betwixt a transient nasal catarrh in a previously sound man and a fatal acute lung ailment in the unsound man.

It should never be forgotten that an unhinging of the heat-regulating mechanism, caused by exposure in the Chickahominy swamps in 1862, may become the prime cause of a soldier's death from pneumonia in the coming winter of 1888-9.

The laws which pension the widow and orphan are iron-clad. No commissioner can make the much-needed rules that shall pension all regardless of the cause of the husband and the father's death, consequently we, as the family

physicians of these veterans, should see to it when a soldier dies of an acute disease that the part played in the fatal drama by diminished vital resistence that was the consequence of his pensionable ailments shall be scientifically determined, the facts properly written out and covered by an affidavit duly signed and sealed according to law, ever "holding evenly balanced the scales of justice between the pensioner and the Pension Bureau without prejudice or partiality to either."

HORACE P. PORTER, M.D.,
Late Assistant Surgeon 7th and Surgeon 10th Reg. Conn. Vols.
Oneida, Kansas, Nov. 6, 1888.

Microscopy.

MORE CARE REQUIRED IN PRELIMINARY PREPARATIONS OF MATERIAL.—If we may judge from mounted specimens and prepared material sent to the writer, from various sections of the country, the majority of workers seem to think that so long as a substance is rendered sufficiently hard for sectioning, the selection of the hardening medium cuts no figure in the value of the final results. That this is a great error every experienced microscopist, and especially every worker in animal histology, well knows. There is, so far as we now know, no perfect hardening medium—that is, none that will harden the material without modification of the cellular structure, and each of the media now in use has its own peculiar defects. This is especially true when we have brain matter, the spinal cord, etc., to deal with. The question as to the manner in which the various hardening media affect the ganglion cells in the spinal cord has recently been studied by Dr. S. Trzebinski, who communicates the result to *Virchow's Annalen*. When Müller's fluid was used (hardening in from 4 to 5 weeks), the material being afterward washed and placed in alcohol of from 10° to 96°, pericellular spaces were observed. In hardening with alcohol of from 96° to absolute, or by gradually increased strength, vacuoles were shown in the cell substance. When chromic acid was used first (commencing with one-tenth and increasing to one-quarter of one per cent. after 48 hours), and the matter afterward placed in Müller's fluid or alcohol, the cell contents did not show the same structure as the

cells of material examined fresh. Finally, when the 10 per cent. sublimate solution was first used and the hardening finished with alcohol containing one half of one per cent. of iodine, the sections did not take staining evenly, the susceptibility of cell contents becoming inconstant toward stains. The stains used were borax carmine, alum carmine, Weigert's hæmatoxylon, magenta and Weigert's process. The author states that he finally obtained the best results with the last quoted method (sublimate solution followed by iodized alcohol).—*St. Louis Med. and Surg. Jour.*

Bacteriological Examination of Tissues.—For the investigation of microbes in the tissues the method of Gram is considered one of the best. It consists of staining the preparations with gentian violet, after which they are treated with the iodo-iodide solution (iodide in potassium iodide). They are then bleached with absolute alcohol and again stained with an aqueous solution of eosin or saffranin. Baumgarten has recently improved on this process, and produced what he calls triple staining. The details of his process, as given by M. Lewin, are as follows:

The sections are washed in absolute alcohol, whence they are removed to a stain of borated picrocarmine (made by adding crystals of picric acid to Grenacher's borated carmine solution until a blood-red color is obtained). In this they are left for five minutes, and when removed, the excess of coloring matter is removed with filter paper. The sections are next placed in absolute alcohol, to which one or two crystals of picric acid have been added, or enough to give it the color of Rhine wine, and kept there from two to four minutes. The sections are then placed in gentian violet solution (Ehrlich's), made as follows: 5 parts oil of anilin are dissolved in 95 parts of water, and to the solution 11 parts of alcoholic solution of gentian violet are added. After agitation 10 parts of absolute alcohol are added, and the mixture filtered. The solution should be freshly made at least every eight days. From the gentian violet solution the sections are removed to Lugol's solution (iodine, 1 part; potassium iodide, 2 parts; water, 300 parts), where they are left for one minute. From this they go to absolute alcohol again for thirty seconds.

The sections are now heavily stained with gentian violet, and in order to draw or bleach them, they are placed in a mixture of hydrochloric acid, 3 parts; absolute alcohol, 97

parts. This is a delicate and critical point in the work, and must be very closely watched or all your labor will be lost. The operation is completed by again washing the sections in the picrated alcohol. The sections are cleared in oil of cloves and mounted in balsam dissolved in xylol.—*St. Louis Med. and Surg. Jour.*

Gleanings.

Sickness and Mortality During the War of the Rebellion.—We learn from Part III of the "Medical and Surgical History of the War of the Rebellion," now on our table, that the number of cases of disease reported among the white troops during the period, May 1, 1861, to June 30, 1866, was 5,424,547, and the number among the colored troops during the three years ending with the latter date was 605,017; making a total of 6,029,564 reported cases of disease.

The following is reported to have been the mortality:

Killed in Battle—White, 42,724; colored, 1,514; total, 44,238.

Died of Wounds, etc.—White, 47,914; colored, 1,817; total, 49,731.

Died of Disease—White, 157,004; colored, 29,212; total, 186,216.

Died, Unknown Causes—White, 23,347; colored, 837; total, 24,184.

According to these statements the total mortality of soldiers during the war was 304,369. Of these who lost their lives, 270,989 were white; and 33,380 were colored.

It is stated that among the white troops the cases of disease reported during the five and one-sixth years embraced in the statistical records numbered 12,579, and the deaths 276 in every 1,000 men of mean strength. Among the colored troops, during the three years of their service, there were recorded 9,897 cases of sickness and 430 deaths from disease in every 1,000 men of mean strength. Disease was not only more frequent among colored soldiers than among white, but it was also much more fatal.

The popular idea that our armies suffered severely from disease during the campaigns of the civil war is well sustained by statistics, in view of the fact that no notable epidemic of imported pestilence, as of typhus, cholera or yel-

low fever, contributed to the mortality. Had our camps been unhappily visited by these scourges the annual mortality of 53 per 1,000 of strength would have appeared light in comparison with the terrible record which would have formed the record of a medical history of the period.

Among the white troops diarrhea and dysentery occurred with great frequency, and occasioned a large mortality. These intestinal affections were the cause of more than one-fourth of all the entries upon the sick reports. Malarial fevers followed in order of frequency, having constituted, if typho-malarial cases are included, about one-fourth of the whole number of cases of disease. But in order of gravity the continued fevers, consisting mainly of typhoid cases, took the second place, having caused 216 deaths in every thousand from disease, although contributing only 16.5 cases to every thousand cases of all diseases.

ANTIFEBRIN.—After a three months' use of antifebrin I am persuaded that in it we have a drug which, for purposes of reducing fever, controlling pain, procuring sleep, etc., can be absolutely relied upon. In all conditions where I had previously used antipyrin, except as an anti-spasmodic in whooping-cough, asthma, etc., I have found the effect quite as efficient and in many cases to be preferred, as I believe it is less depressing, and smaller doses suffice.

Antifebrin possesses the advantage of being about one-half as expensive, and, in addition, is not a patent medicine.

Dr. Knorr, the discoverer of antipyrin, shrewdly patented it, and is reaping a rich harvest, and has had the advantage of most patent medicine venders, in that his drug has been advertised in the medical journals all over the world, without money and without price.

Even though antifebrin and antipyrin were equally good and similarly cheap, the former would deserve the preference of the consistent physician, on account of being not patented.

The following formula is a pleasant and convenient form of administering antifebrin, viz.:

℞	Antifebrin, ...	℈ij.
	Alcohol, ...	℥ij.
	Glycerine, ...	℥iij.
	Aquæ cinnamomis, ...	℥j.
	Syr. simpl, ...	℥iij.

M. Sig. One-half teaspoonful to two teaspoonfuls every two to four hours, according to age and necessities.

The alcohol prevents the disposition to depression on the part of the drug.—*I. N. Love, M.D., in Weekly Medical Review.*

A New Theory in Regard to the Functions of the Duodenum.—Treves has observed that the third portion of the duodenum is firmly attached to the four lumbar vertebræ by a ligament called the musculus suspensorious duodeonalis. This fact is observed pretty constantly in animals and in man, also that the duodenum forms a curve something like the siphon trap. The fixed portion always being stationary, allows the free portion to assume varying degrees of curvature. The duodenum being always more or less filled with fluid from liver and pancreas, this curving of the duodenum performs the function of a siphon trap, and absorbs all the fetid gases that form in the bowels, that might have a tendency to regurgitate upward.—*Weekly Medical Review.*

Sterilized Food for Infants.—It is a curious fact that while all older people are chiefly fed on sterilized (cooked) food, infants are fed on food peculiarly adapted, by its composition and fluid state, to offer a home to bacteria.

In treating some cases of summer diarrhea, directions were given that all milk used for infants should at once, on receipt, be steamed. After this it was kept covered, and on ice if possible. The result was that the little patients began to pick up and were soon well.

The ordinary milk supply of a large city is a day or more old, slightly acid, and contains many growing bacteria.

Fresh milk sterilized, or collected sterile and protected from organisms, undergoes no changes, even after the lapse of indefinite periods, except the separation of the fats. If bacteria are present, a great variety of changes may occur. As milk affords such a fine medium for growth, all efforts to rid it of bacteria must be governed by the use of poisons—germicides—or some physical condition inimical to their life.

The first method is not admissible in foods, while the other offers little chance of success except by heat. Cold retards their growth, but does not kill. Boiling is undesirable, but steaming produces but slight change in the milk, and is efficient.—*American Journal Medical Sciences.*

Artificial Fecundation.—Since the Abbé Spallanzini, in 1767, fecundated bitches, and Hunter, later on (1799), succeeded in rendering a man with hypospadias a happy father, the operation of artificial fecundation has passed through many different experiences, which has brought it more than once before the tribunal of both public opinion and the laws of countries. Eight years ago a married couple in Bordeaux, despairing of having a family, consulted a doctor Lajatre, who, by circulars spread about the country, pretended to render sterile marriages fruitful by a special operation. The doctor performed the operation, but no such result followed, and his clients refused to pay him the fee demanded, £60. He thereupon summoned them before the magistrate, but this worthy representative of the law, after listening to the explanations of the doctor—which, by the way, were very minute, all the details of the operation being entered into—not only dismissed the case, but fined the plaintiff for revealing professional secrets. Further, the magistrate gave it as his opinion that artificial fecundation was repugnant to the laws of nature and a positive social danger, and that such procedures should not be put into practice. This verdict was taken up by the Society of Legal Medicine, as it is called in France, and the President (M. Brouardel) said that the operation might be performed where, after other means had failed, no reasons were found in the man or the woman to account for sterility. Encouraged by this declaration, M. Lajatre came up to Paris, where he advertised in the daily papers his method of procuring families. It will be remembered that the Paris Faculty refused to accept a thesis on this subject presented by a student called Gérard. Last year a sort of company was got up in the capital, sending, broadcast, pamphlets entitled *Do Vitam*. A large apartment was hired in the Chaussée d'Antin, a doctor was engaged to do the operation, and for a time all went on well. Disappointed husbands and wives came in numbers, but some disagreement took place between the parties interested, and the whole matter has now been placed in the hands of the lawyers, from which it is not likely ever to come out. —*Medical Press and Circular.*

Primary Syphilis of the Tongue.—E. O., a sailor, aged forty-five, consulted me on March 4th for a sore on the

tongue. On examination, a hard, indurated mass about the size of a filbert nut was felt in the middle third of the organ on the left side. It was ulcerated on the surface and sides; the palate and gums were covered with mucous patches; the cervical submaxillary, inguinal glands were enlarged, and on the following day a copious papular rash appeared, extending from the scalp to below the knees.

The initial lesion of syphilis on the tongue is, I think, rather a rare occurrence, especially so far back as this. The man strongly resented the idea of having contracted it from his fellow sailors, nor, as far as I could ascertain were there any others on board suffering from primary or secondary syphilis. He admitted connection in the ordinary way on December 8th, 1887, two days before leaving London, and first noticed the sore three days after arriving at Calcutta, on February 7th, 1888, and had never been on shore after leaving home. If he contracted it on December 8th, this would give a very long incubation period of sixty-one days, so I am still inclined to think he was infected through using a common pipe, or in some similar manner, from some one else on board.

All the symptoms are improving under the usual mercurial treatment.—*J. Bell, Lancet.*

Abortive Typhoid Fever.—In a recent study upon typhoid fever, Prof. Brouardel accepts as a demonstrated fact the existence of *typhoidette* or "little typhoid fever," which, although it runs its course unperceived, demonstrates its true nature by conferring immunity to future attacks of the disease in all of its forms. Prof. Grancher has examined the considerations which permit us to place within the category of typhoid fever as abortive forms certain cases which were formerly regarded as prolonged gastric disturbances of a febrile character, or as synochal pyrexias. From a clinical point of view it seems to have been thought desirable to admit that at a certain period a rigorous distinction should be made between true typhoids and these light febrile affections, but it is now demonstrated that we can not, for this purpose, base our distinctions either upon temperature or the existence of stigmata. There are, in fact, cases of undoubted typhoid fever in which the temperature is wholly irregular, and presents none of the usual febrile peculiarities of this disease. The spots also do not of themselves possess so great a significance as has been supposed. Many

cases are cited in which they have not been observed at all, and they are often met with in morbid conditions, wholly disconnected with typhoid fever. The line of demarcation between typhoid and these similar febrile conditions is therefore not sufficiently well marked to enable us to separate them in any absolute way. More than this, experimental pathology now permits us to study attenuated maladies in a more complete manner. In experimental charbon, for example, we have an affection in which we may observe every degree of intensity in accordance with the variation of the germ or the soil. In certain cases it is only necessary to vary the place of inoculation in order to get an entirely different symptomatology. If, in the inoculation of contagious peripneumonia, for example, the liquid is introduced under the skin of the thorax, the animal certainly dies in a few days. If the inoculation is made under the skin in the region of the tail, where the tissues are more compact, we obtain a vaccination of simple local gangrene; finally, if the liquid is introduced into the trachea, no symptoms follow; nevertheless, the animal is really vaccinnated, and will afterward have immunity from the malady. We see that great differences of effect arise in accordance with the point of inoculation adopted. It would be a reasonable supposition that in typhoid fever also the modalities presented are in conformity to the soil, the germ and the point of inoculation. These modalities may, under such influences, present the most extended variations.—*Jour. de méd. et de chir.*

Perro's Method of Reducing Strangulated Inguinal Hernia.—G. S. Perro uses the following method: After the pelvis has been raised on a pillow, and the thigh flexed and abducted, the operator grasps the scrotum and hernial tumor, bends it slightly against the wall of the abdomen, and presses upon it in such a way that the index finger of the right hand is carried into the inguinal canal, and in the direction of the horizontal ramus of the pubes by a turning and boring motion; in a short time the strangulated part slips back into the abdominal cavity, and the other part follows. By this method Perro has succeeded in reducing six cases of strangulated hernia, after his colleagues had spent from twelve to thirty hours in vain attempts at reduction.—*Centralblatt für Chirurgie.*

TREATMENT OF SPRAINS.—Dr. C. A. West (*Chicago Medical Times*):

Every doctor has been perplexed with the treatment of sprained ankles or wrists or knees. The treatment must often be prolonged, and the pain and swelling often remain for a long time, until the patient, who is apt to be an active, restless, healthy business man, becomes no longer patient—nor your patient; as he consults some other medical man, who may inform him that his great mistake was in not consulting him at first, as all valuable (?) measures have been neglected.

Liniments in these cases are of but little use. Relief from pain is the first essential to be produced in a way which will further the process of cure. This may be done by stimulating the circulation of the part, thus preventing blood stasis and engorgement about the part. Immerse the injured joint in hot water, or hot salt and water, for from twelve to eighteen hours if necessary. As soon as the major portion of the swelling and the pain has abated, apply to the afflicted part a light plaster-of-Paris, or starch, dressing, to insure immobility, and be assured that the cure in most cases will be very speedy and remarkably satisfactory. The writer has tried this in several cases, and he has yet to have a single unsatisfactory result.

ON TREATMENT OF WOUNDS OF THE PALMAR ARCH WITH SHOT-BAG PRESSURE.—Dr. M. Reece gives the following history of an interesting case in the *Medical and Surgical Reporter*, of June 23, 1888: Mrs. H. cut the superficial palmar arch of the left hand, on the radial side, while opening a can of fruit. The bleeding was considerable, and was arrested for a time with compression applied by the husband. The next day the hemorrhage recurred to such an extent that a physician was called. The bleeding was again arrested with pressure, but as it was badly borne it was relaxed, and during the night profuse and exhausting hemorrhage took place. By this time considerable swelling and infiltration of the tissues of the hand and wrist had also taken place, and the attending physician believing it necessary to tie the arteries at the wrist, I was sent for in consultation.

Upon arriving at the patient's home, I found the doctor had remained all night, for the reason that the amount of pressure applied caused so much pain that it had to be frequently removed, and then the bleeding would begin

immediately. The patient was a spare woman, anæmic, and very nervous.

A small bag, four inches in length and two and a quarter inches in width, was made and filled with bird-shot. The fore-arm was placed on an elevated pillow, and the shot bag placed lengthwise on the wrist over the arteries. The pressure was well borne, giving no pain or uneasiness. The wound began to heal rapidly, and in four days the weight was removed, and no tendency of the bleeding to show itself was manifested.

Book Notices.

CASE OF EMPEROR FREDERICK III.—Full Official Reports By the German Physicians and By Sir Morell Mackenzie. The Reports of the German Physician Translated By Henry Schweig, M.D. Paper. 12 mo. Pp. 276. New York: Edgar S. Werner.

This volume is composed of two parts. Part First contains the Reports of the German physicians; each one constituting a chapter, viz: 1st. Report of Dr. E. Gerhardt; 2d. Report of Dr. E. Von Bergmann; 3d. Report of Staff-Physician Dr. Landgraf; 4th. Prof. Schötter; 5th. Dr. Moritz Schmidt; 6th. Dr. Bramann; 7th. Dr. Von Bergmann, (continued); 8th. Dr. Kussmaul; 9th. Dr. Waldeyer; 10th. Dr. Von Bergmann, (continued); 11th. Prof. Bardeleben, 12th. Autopsy of Emperor Frederick III; 13th. Microscopical Report of Prof. Virchow and Waldeyer of Specimens from the Remains of Emperor Frederick III.

Part Second is devoted entirely to the Reports of Sir Morell Mackenzie. Prof. Mackenzie opens with a preface. Then follows his report of his first visit to Berlin and Potsdam, which is followed by an account of his second visit to Potsdam. More than half of the volume is occupied by Mackenzie. On page 194 he describes the attacks upon him by what he terms the "Reptile Press." On page 204 he again speaks of "The Reptilia Again."

Says the translator: "It is very unfortunate that a controversy which should have been conducted on a purely professional basis has degenerated into crimination, recrimination, and has introduced a vituperative element certainly not in accord with the standing of the men indulging in it."

THE PHYSICIAN'S LEISURE LIBRARY.—A Treatise on Hysteria and Epilepsy, With Some Concluding Observations on Epileptic Insomnia. By Leonard Corning, M. A., M. D., Consultant in Nervous Diseases to St. Francis Hospital, etc. Paper. 12 mo. Pp. 176. Detroit: Geo. S. Davis.

THE PHYSICIAN'S LEISURE LIBRARY.—The Modern Treatment of Diseases of the Kidney. By Prof. Dujardin-Beaumetz, Member of the Academy of Medicine and of the Council of Hygiene and Salubrity of the Seine, etc. Translated from the Fifth French Edition by E. P. Hurd, M.D., Newburyport, Mass. Paper. 12 mo. Pp. 169. Detriot: Geo. S. Davis.

As we have stated in a previous issue, there is a number of "THE PHYSICIAN'S LEISURE LIBRARY" published each month, or twelve numbers during each year. The price per number in paper is 25 cents; cloth, 50 cents; per set, in paper, $2.50; per set, in cloth, $5.00.

Hysteria! Who understands its pathology, if it has any? It is said to be a disease, and all diseases are supposed to have their origin in a pathology peculiar to themselves. But can the pathology of hysteria be described? What can be the pathology of an affection that a mental emotion may hold in abeyance the phenomena or symptoms of it? A woman is said to have a hysterical affection of a knee-joint. A very disagreeable application is made to it, and at once all symptoms disappear. Surely, under such circumstances, there could not have been any pathological condition of the joint, or its normal condition would not have been restored by an application; the only effect of which was to produce an unpleasant feeling. Consequently, whatever there is that may be pathological in a hysterical disorder of the knee-joint is not to be found in the joint itself, but it must be looked for in the nervous system.

Says the author of the work: "So heterogenous and multitudinous are the symptoms of the disease known as hysteria that an exact description of the affection is exceedingly difficult, and an adequate definition little short of impossible.

"We can be certain, however, that a large proportion of the manifestations of the affection are directly attributable to a functional derangement of the brain and spinal cord, while not a few of the phenomena are probably traceable to

a morbid condition of the sympathetic and periperal nervous system.

"It is impossible, moreover, to regard hysterical phenomena as the result of other than purely functional disturbances of the nervous system, since pathological anatomy has failed to afford other than negative data."

Some ten chapters of the work are devoted to hysteria, in which are considered the psychical manifestations, vasomotor disorders, motor disorders, hysteria in children, in men, causation, pathology, etc.

After considing hysteria fully, the author takes up Epilepsy, to which thirteen chapters are devoted. It is not necessary for us to follow in detail the author's method of treating this affection. It is sufficient to say that all that is known in regard to this important and obscure disease is fully set forth.

As regards the volume of the "*Leisure Library*" by Dujardin-Beaumetz on Diseases of the Kidney, we will quote a few lines from the introduction by the author: "The importance of a knowledge of this department of internal pathology and therapeutics is incalculable, and scarcely a day will pass when the physician in active practice will not have occasion to make application of some of the principles laid down in this treatise."

THE MEDICAL BULLETIN VISITING LIST OR PHYSICIAN'S CALL RECORD. Arranged upon an Original and Convenient Monthly and Weekly Plan for the Daily Recording of Professional Visits. Philadelphia: Published by F. A. Davis.

This is a most convenient Visiting List. It embraces a new feature in recording daily visits. The necessity of rewriting the names of patients *every week is obviated*, as the arrangement of *half-pages requires* the transfer of names only once a month; at the same time the record is kept just as perfect and complete in every detail of *visit*, *charge*, *credit*, *etc.*, as by the old method. From this it will be seen that a large amount of valuable time is saved, as well as a great deal of labor formerly necessitated in rewriting the patient's name.

Its use can be begun at any time. It contains a calendar for the last six months of 1888, all of 1889, and 1890. It contains Dr. Ely's Obstetrical Table, and other valuable tables, with much useful information. Then a blank page,

appropriately ruled for special and general memoranda, addresses of patients, nurses and others, birth and death records, bills rendered, cash account, etc.

There are two sizes. No. 1. Regular size, to accommodate 70 patients monthly or weekly, price $1.25. No. 2. Large size, to accommodate 105 patients monthly or weekly, price $1.50.

A Manual of Dietetics for Physicians, Mothers and Nurses. By W. B. Pritchard, M.D. 12mo. Pp. 88. Cloth. New York: Published by the Dietetic Publishing Company. Price 50 cents.

This book will be found a compendium of very useful information and instruction upon the management and feeding of infants and the selection of food for the sick. The importance of proper food in its effect upon the progress of any illness has long been recognized, but it is only within the past few years that any definite effort has been made to systematize the subject from a scientific and practical standpoint. Dr. Pritchard, in his Manual, has taken up each disease separately, and has carefully and elaborately outlined the diet most appropriate in each affection, basing the selection of food upon the effects of the disease upon the system and special organs and functions involved.

The vexatious question, "What shall I give my patient to eat?" need not prove a source of annoyance to the physician or nurse any longer. With your Manual to refer to, you have a reliable and convenient source of information constantly at hand.

As it is printed in small type (nonpariel), yet clear and plain and easily read, it contains as much matter as ordinary works having three times its number of pages.

We think physicians would do well to advise their patrons having families of little ones to purchase it.

The Vest Pocket Anatomist. (Founded upon "Gray.") By C. Henri Leonard, A.M., M.D., Professor of the Medical and Surgical Diseases of Women and Clinical Gynæcology in the Detroit College of Medicine. *Fourteenth revised edition*, containing 193 illustrations, "Dissection Hints" and Visceral Anatomy. Cloth, 12mo., 304 pages. Price $1.00. Illustrated Medical Journal Co., Publishers, Detroit, Mich.

The new fourteenth edition of this work has been increased in size by the addition of over one hundred pages of text and one hundred engravings; the page of the book has also been somewhat enlarged to accommodate better the engravings. The Brain and its Membranes, the Eye, Ear and Throat, in fact the entire Viscera and the Generative Organs of both Sexes, forms the new subject matter in this edition. Besides being a very popular dissecting room companion, it has become also a very popular surgical case companion for the practitioner, since the illustrations show at a glance (being photo-engraved from the English cuts of Gray) the positions of all the important bloodvessels, nerves, muscles and viscera.

Every physician should have a copy. A glance at an illustration and the brief description oftentimes will be all that is necessary to refresh the mind.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS. from the French, by Dr. Illowy, Cincinnati, Ohio.

TREATMENT OF ACUTE AND CHRONIC CYSTITIS.

PROFESSOR NEUMANN, of Vienna, in a series of lectures lately delivered, has given a resumè of the actual state of our knowledge of these conditions.

The prophylaxis consists naturally in the treatment of the affections that may give rise to these maladies: Gonorrhea, urethral retraction, diseases of the prostrate. Besides the well-known hygienic measures, especial attention must be given at the outset, and when the gonorrhea reaches its acme, to use etherial balsamic mixtures, make the injections with less force and abstain from the introduction of sounds.

The treatment of the cystitis proper depends upon the stage and the severity of the malady. The acute state demands only an expectant, symptomatic and antiphlogistic treatment, appropriate to the circustances. The fundamental indications for the treatment of the acute form are: first, to limit the inflammation; second, to combat the pains and the tenseness; third, prevent the retention of urine.

Naturally we should begin by combatting all the influences

capable of keeping up the inflammation. Thus, in acute prostatitis we must be careful not to employ any balsamics, not to resort to catheterization; the patients are to be kept in bed, dorsal decubitus, and put upon a restricted diet. The condition of the bowels must be watched, so that fecal stasis do not augment the passive congestion of the region by compression of the hemorrhoidal veins. The drink will be regulated so as to avoid diuresis, Fresh water, lemonades are the best; of mucilaginous drinks, orgeat (barley water) is the best. Milk and cream are excellent food. If there be any fever, quinine, or sudorific potions; infusion of linden, or of elder flowers. To limit the compression of the genito-urinary apparatus, a soothing and antispasmodic hydropathic treatment adapted to the sensitiveness of the individual is employed. At the outset warm sitz-bath; gradually these baths are cooled more and more, just according to how the patient reacts thereto. Later on we may resort to demi-baths, but these should not be taken as warm as the sitz-baths. In the interval, cold cataplasms or ice-bags are applied to the perineum and abdomen. If necessary, applications of cold can be made by way of the rectum. If these cold cataplasms are badly borne they can be supplanted by warm poultices of flaxseed, or cornmeal with the addition of some narcotic or aromatic herbs; sitz-baths or full warm baths. If the antiphlogistic treatment does not relieve the pain and the tenesmus, narcotics are administered either internally or subcutaneously, or in the form of suppositories, (rectal or vaginal) or of rectal injections. When administering it internally we should use morphine combined with lupuline, with bi-carbonate of soda, with the extract of cannabis Indica, with camphor. The extracts of belladonna and hyosciamus are rather uncertain in their action:

℞.—Lupuline, (pur.) . . . grs. xxx.
Morphia muriat, . . grs. ii.
Sacch. alb. . . . . ℥ij.
M. triturat. bne. and ft. pulv. divide in. pulv. æqual No. x.
Sig. 3–5 powders per day.

℞.—Pulv. G. camph. . . . 4 grammes.
Ole. amygdal dulc. . . 20 "
Pulv. G Acac. . . . 10 "
Aq. destill. . . . . 150 "
Syr, Simpl. , , , 50 "

M. ft. Emulsis. Sig. A dessertspoonful every two hours.

℞.—Extract cannab. Indic. . . } āā 5 grms. 25
Pulv. G. camphor, . . }
Sacch. alb., ... 3 grms.

M. tritur. ben. and ft. pulv. divide in part æqual No. x. Sig. One powder every second or third hour. Besides the decoctions of linseed or of quince seed, with the addition of syrup diacod, as an antispasmodic are very useful.

The suppositories of morphine, the subcutaneous injections of morphine and clysters with tinct. opii. succeed equally well.

If, however, despite these measures, the ischiuria presists, a nonrigid catheter is introduced and the vesical cavity washed out with a carbolized solution of the strength of 0.1 per cent.; if the pains are very violent we can inject into the bladder 300 grammes of warm water with 30 drops of tinct. opii. If catheterism is very difficult, it should be done whilst the patient is either in a warm bath or under an anæsthetie. For an expert surgeon capillary punction of the bladder is never necessary under these circumstances. If the patient is very pusillanimous and very sensitive the catheter introduced may be allowed to remain in for a time. If profuse hemorrhage occurs we prescribe ergot and perchloride of iron:

℞.—Extract ergot, . . . 1 grm.
*Eleo-sacch. cannell, . . 2 grms.

M. triturat. ben. and ft. pulv., divide in part æqual No. x. Sig. One powder every two hours.

or

℞.—Perchloride of iron, . . 1 grm.
Og. destill cannell, . . 100 grms.
Syr. Simpl., ... 10 grms.

M. A tablespoonful every two hours.

When the vesical hemorrhage is obstinate and very profuse, we should inject cold water into the bladder, or allow a catheter or sound to remain in and to act as a tampon.

*Eleo sacchar is sugar with the addition of some aromatic oil, as oil of fennel, oil of wintergreen, &c., found in Ger. Pharmac.

In still graver cases of hemorrhages it sometimes becomes necessary to inject slightly astringent solutions. The following are the best.

℞.—Nitrate of silver solution, . 1 to 500 or 300.
Solution of perchloride of iron, ½ to 1 per cent.
Solution of Tannin, . . . ½ to 2 per cent.

The abortive treatment, so-called, proposed by Bortzean, and which consisted in prescribing very large doses of copaiba, especially where severe hemorrhage is present, is most certainly injurious.

When the most painful symptoms have been combated, expectant treatment is indicated.

In order that the secretions may be more quickly evacuated, the different diuretic and astringent infusions may be given; decoctions of the leaves of uva-ursi; decoctions of the root of pareira brava; or a mineral water may be prescribed to be drank with warm milk.

When the vesical catarrh is prolonged, and it becomes a question of catarrh of the bladder in the second or third degree, then the treatment also assumes another phase, *i.e.*, here local treatment is the method of medication indicated, and is the one that gives the best results.

As Dittel has well said, the bladder becomes a vast cyst, having but a small opening, and, therefore, it is necessary to treat it.

It is necessary, first, to watch that the secretions have a free and full exit; second, to disinfect it; third, to diminish it; fourth, to favor the repair of structural alterations. We best fulfill these indications by being careful to empty the bladder thoroughly, by washing it carefully and frequently, and by making medicated injections.

The instruments necessary for the local treatment of the bladder are the soft or elastic catheters, or, more especially, the curved catheters. The double current catheter does not permit of a thorough cleansing of the bladder.

The catheterism and the injections should be made with the patient in the horizontal position. The injections should be made warm, because cold injections ordinarily produce dysuria. In the ordinary cases, regular evacuation and washing out succeed in effecting a cure.

As to the choice of liquids to be injected, the author lays down the following principles; first, to inject water at

about the temperature of 25° C.; second, tinct. Opii. in warm water, 10 drops in 20 cubic centimetres of water; third, solutions of cocaine 5 to 25 per cent. in strength.

Where the catarrhal secretion is very thick the author advises solutions, 3–5 per cent. in strength, of Glauber's salt, of ordinary salt of borax, of lime-water, etc.

Among the caustics there must be mentioned nitrate of silver, 0.1—1 per cent.; it is well tolerated, and very efficacious. The sublimate in solution, one-tenth, is very useful in bacteriuria; the tincture of iodine is too irritating; calomel, in supension in water, was used by Bachman. Clognet preferred the caustic potash in very weak solutions. Lisfranc, Toulmouche, Werltoff have spoken of the tincture of cantharid. The list of medicaments, both astringent and tonic, from which to choose is quite extensive. Among these remedies we count alum in solutions of ½ to 5 per cent.; sulphate of zinc, phenate of zinc in solutions of 0.25 to 2 per cent.

According to Dittel, the solutions of chloride of zinc, in the strength of 0.5—2 per cent., as proposed by Max Schüller, provoke too severe a reaction. The acetate of lead, the perchloride of iron, tannin in solutions of 0.5 to 2 per cent., tincture of nutgalls; decoctions of cinchona bark, of simaruba, gum kino, balsam of copaiba, etc. The antiseptics employed in these cases are the permanganate of potassa, in solutions of 5—30 per cent., when bacteria are present in the urine; carbolic acid, in solutions of ⅛ to 1 per cent., when the bladder is not very sensitive; boric acid in 3 per cent. solution; salicylic acid (solution of 25 to 50 per cent.), when the crystals are not completely dissolved, has too severe an action; salicylate of soda (solutions 1—5 per cent.), benzoic acid, 0.05 to 0.02 per cent.; resorcine (in solution of 5 per cent.), the chloride of lime. Iodoform, in a powder in suspension in glycerine, mixed with alcohol, ether, turpentine, is worthless; it acts rather as an anæsthetic than upon the malady itself; sulphate of quinine in solutions of 1—10 per cent. To dissolve the sediment when the urine is alkaline there are used: hydrochloric acid, in strength of 25 to 50 ctgrms. per C. (Michaelis); water acidulated with a few drops of nitric acid (Brodie). To combat the bad odor of the urine, use is also made of a drop of nitrite of amyl in 150 grms. of warm water.

The technique of the local treatment varies, according as

the case is one of disease of the whole of the bladder, or only of part of it. In the first instance, the treatment should at the same time extend to the posterior parietes of the urethra, and we proceed as when confronted by a posterior urethritis. In total cystitis the injected fluid must come in contact with the whole internal surface of the bladder. The medicated injection is left in from 5 to 10 minutes, during which the external orifice of the catheter is kept closed with the finger. It is then allowed to run out. If a rather marked sensation of burning remain after the injection, we may inject a quantity of lukewarm water. When there is marked dysuria, recourse is had to the subcutaneous injections of morphia. The derivatives employed against the chronic catarrh have no influence at all. Blisters are bad because they favor the production of a false membrane.—*U. M. d'C.*

(*To be continued.*)

Editorial.

Decease of Prof. L. R. Peet.—Prof. L. R. Peet of Yalaha, Florida, formerly of Baltimore, Md., we have learned has recently died. It was with great sorrow that we heard of his decease.

Prof. Peet was a skillful microscopist. His vegetable stainings and mountings could not be surpassed in beauty. He sent us many of his mountings, which always excited very great admiration in all to whom we exhibited them. While in Baltimore he was an educator, but failing health compelled his removal to Florida, where he engaged in literary pursuits, writing for different papers. He contributed a number of articles for the Medical News on the climate of Florida, and its advantages as a health resort to those affected with, and predisposed to, lung disease. He assured us, several years ago, that his life had been prolonged by his removal to Florida; but it seems that he finally fell a victim to, we believe, phthisis pulmonalis, to which he had had evidence, for many years, he was predisposed.

Though we never met Prof. Peet, yet a familiar correspondence with him maintained for quite a number of years on microscopical and histological subjects, caused us to have a high esteem for him on account of his abilities and learning. He evidently had a great love for the study of the

natural sciences, and cultivated them most sedulously. His letters to us showed that he was a gentleman of high moral character, who was desirous to add to the general intelligence, and to do all the good in his power. We have no doubt the world is better by his having lived in it.

FREDERICK THE NOBLE.—This is the title which Sir Morell Mackenzie applies to Frederick III, late Emperor of Germany, in his report of his attendance upon the royal patient. Sir Morell had a most exalted opinion of the Emperor, unless his professions were expressed for the purpose of ingratiating himself in the affections of the royal family. He thus describes the dying moments of Frederick: "At 11 o'clock the eyes of the poor patient, which had languidly followed every movement of the Empress, became fixed, the intervals in drawing breath became greatly lengthened, and soon after 11 A.M., I had the sorrowful duty of announcing to the Empress that life was extinct. With his broken-hearted family, and several of his devoted servants kneeling round him, Frederick the Noble breathed his last.

"Thus passed away the noblest specimen of humanity it has ever been my privilege to know. Of his military achievements and his political wisdom it would be presumption for me to speak. Kindness of heart was *the* leading feature in the public estimate of him. Only those whose official position brought them into personal contact with him, and a chosen few who were permitted to enjoy his confidence, knew that Frederick III was a man of commanding intellect. His courage in the field is known to all the world; his compassion for suffering and misfortune, and his chivalrous forbearance toward the weak, are acknowledged most freely by those whom he conquered in war. It was my lot to know him under very different circumstances; to see him face disease and suffering with the same unostentatious heroism as he had confronted the enemy in the battle-field; to see him, whilst standing in the very shadow of death, still eager to do what he could for the people over whom he ruled. Only those who had the privilege of constant intercourse with the Emperor Frederick know how much poorer the world is for his death. No one could know him slightly without loving him," etc.

The laryngeal affection of Frederick first manifested itself in January, 1887, by a persistent and progressive hoarseness.

The ailment is said to have commenced with symptoms of an ordinary cold, and the diagnosis of catarrhal hoarseness was accepted at the time. During the following months there was neither cough nor any catarrhal manifestation, only a dry hoarseness. The various remedies usually of benefit in cases of catarrh, as well as the employment of inhalations, gave entirely negative results.

On March 6, 1887, a laryngoscapic examination showed moderate but general redness of the vocal bands. During the respiratory act there appeared plainly on the edge of the left vocal band, between the vocal process and its middle third, a trifle nearer to the former, a pale and apparently uneven projection. The length appeared to be about four millimetres, the heighth about two millimetres. During phonation, the bands approximated closely, and at the point aforesaid there projected an elongated, low, pale-red nodule, which encroached on the vocal fissure. Various means were employed to remove this nodule without success. Finally, the galvano cautery was selected as the destructive agent. This agent was frequently used, according to the report of Dr. Gerhardt, until April the 8th. On that day an examination showed a concavity where the growth had existed. "The general condition of the patient at that time," says Dr. Gerhardt, "was splendid; no cough, no expectoration, the voice still hoarse, but much more resonant than formerly, and better in the morning than in the evening. The noble patient at the time felt as if he had almost entirely recovered." It was then projected that the patient should proceed to Ems for a four weeks' rest.

THE PROBABLE EFFECT OF SMALL FAMILIES IN FRANCE. We clip the following from an exchange. What is said in this article in regard to small families in France is applicable to this country, as regards the native population. Small families are getting to be the rule in the United States. Married ladies consider it *vulgar* to have more than one or two children. Procreation, consequently, is at a discount. A hundred years ago, when a young woman got married, she expected to have children at brief intervals, so long as her procreative functions held out, and she took pride in her ten or twelve children. A lady, however, in these modern times would consider such fruitfulness as disgraceful. Under the circumstances, the hope of the country for main-

taining its population, and increasing the number, is in foreign emigration. Stop the foreign emigration, and we feel sure that it will not take five centuries to totally extinguish the population. We are confident that in two or three hundred years there would be left remaining only the remains of buildings, and of other works of art, as evidence that this country had been inhabited by a great population; like the mounds that are found, and the earthen vessels that are buried in them, are proofs that a people we call the mound-builders once occupied the land, but have entirely disappeared—no one knows where.

At the last meeting of the Académie de Médicine, M. Chervin furnished statistics as to the number of children by households, and arrived at the following conclusions: A little over two million have no children, or 20 per cent.; two million and a half have one child, or 24 per cent.; two million three hundred have two, or 22 per cent.; one million and a half have three, or 15 per cent.; nearly one million have four, or 9 per cent.; five hundred and fifty thousand have five, or five per cent.; three hundred thousand have six, or 3 per cent., and two hundred thousand have seven, or 2 per cent. The average in France is 259 children for 100 households having offspring. That figure is, in the mind of M. Chervin, entirely insufficient, and would explain the feeble increase of the population. *Apropos* of the preceding, I will cite for the satisfaction of your correspondent "M. D.," who thinks that France is to be congratulated on the small number of families, and on the fact that they can be kept at home, the very words of Doctor Lagneau, spoken before the same meeting: "The weakness of the co-efficient of the French natality, considering the exuberant natality of our neighbors, is as manifest as it is to be deplored. If matters go on as at present, it will not take five centuries to totally extinguish our race, and that without the aid of any catastrophe, such as wars or epidemics. The actual proportion of children to marriage is a little less than three, and it has been proved that unless four children are registered to the marriage, the family name will die out sooner or later." The daily press reproduced these words of M. Lagneau and deplored the state of affairs. The colonies are peopled by strangers, to the great prejudice of the mother country. It is true that there are less poor in France than in England, although a great deal of outdoor relief is given, but an Englishman with some chance of success quits his

country for other climes without the slightest regret, but the Frenchman can not bear the idea of abandoning the hearth. If by any chance he wrenches himself away, nostalgia seizes him quickly, and he is forced to return.

Characteristics of Contagious Diseases.—Says Dr. Flick, of Philadelphia, a characteristic of contagious diseases is that persons become acclimated to them. From a scientific point of view this is possibly one of the most interesting features of a contagious disease. It is a physiological principle that the human economy will in time accommodate itself in a measure to the presence of foreign, and even detrimental, substances. In this way we, in time, become proof against the most deadly poisons. It is for this reason that the first part of an epidemic is always the most fatal; and that in the early part of an epidemic a disease proves fatal in a shorter period of time than in the latter part of it.

Purification of Water by Chemicals.—Progress has been made in our knowledge of methods of improving public water supplies. The practice of adding a minute quantity of alum to water in order to clarify it is an old and very familiar one. Recently one method of applying it continuously to public water supplies has been patented. Professor Albert R. Leeds, of Hoboken, N. J., added alum, in the proportion of half a grain to a gallon of water, and found, with the precipitation of peaty matter, etc., a reduction of the bacteria to such an extent that whereas before precipitation it contained 8,100 colonies per cubic centimetre, after precipitation the supernatant water contained only eighty colonies. They were all the bacterium lineola, and by filtering this supernatant water through a double thickness of sterilized filter paper into a sterilized tube, he found no bacteria in the filtered water. An interesting question is, whether or not the bacteria of typhoid fever would be removed by this same agent in a similar manner. Professor Leeds suggests the addition, also, in certain cases, of lime or soda, or a minute amount of soluble iron salt, like ferric chloride, and its removal, together with the bacteria, by filtration.

Catarrh Cures.—A writer in the *Weekly Medical Review* says: "I have collected every catarrh, asthma and hay-fever 'sure cure' that is in the market, numbering in all

fifty-eight, and have carefully examined them. Eighteen of these 'sure cures' are bold-faced frauds. One ounce of quassia chips, a pound of table salt, forty gallons of water will make one barrel of 'sure cure,' that sells for one dollar a bottle, holding six ounces. The same quantity of water, a pound of muriate of ammonia, a pound of ground cubebs, and a little common potash will make another 'cure' that sells for fifty cents a bottle, holding four ounces. These two are the best of the eighteen frauds."

VACCINATION'S power of protection against smallpox is effectually shown by the recently published statistics of the German Empire, in which the practice of vaccination and revaccination is compulsory. For the year 1886 the small-pox death-rate for the whole empire was only .03 to each 100.000 of the population. In the larger cities it ranged from .07 in Berlin to 3.6 in Hamburg. Compared with the German cities, the rates in other European cities, where the practice is not compulsory, the death-rates from smallpox ranged from .06 in London to 4.9 in Liverpool; Paris, 9.0; Brussels, 11.4; St. Petersburg, 15.3; Moscow, 34.1; Vienna, 26.2; Venice, 51.6; Rome, 134.3; Genoa, 153.8; Pesth, 368.7; Marseilles, 545.3, to the 100,000 of population. More than two-thirds of the deaths from small-pox in Germany were in cities like Hamburg, which have a large foreign shipping trade, and in those districts which lie immediately along the Russian and Austrian borders.

WONDERFUL DISCOVERY IN GLASS—THE FUTURE OF THE MICROSCOPE.—*Ironmongery* of April 30 says: "Perhaps the most remarkable recent discovery is the new glass which has just been made in Sweden. At present common glass contains only six substances, while the new Swedish glass consists of fourteen, the most important elements being phosphorus and boron, which are not found in any other glass. The revolution which this new refractor is destined to make is almost inconceivable if it is true, as stated, that while the highest power of the present microscopic lens reveals only the one four-hundred-thousandth part of an inch, this new glass will enable us to distinguish one two-hundred-and-four-million-seven-hundred-thousandth part of an inch. What are we coming to? Is it going to be possible to see into the human frame through the pores of the skin?"